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ORIGINAL ARTICLES.

THE DYSPEPSIA OF INFANCY.*

A Clinical Lecture Delivered at the London Hospital.

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DYSPEPSIA in the infant differs very considerably from the disorder bearing the same name in the adult. You are aware of the multiform phenomena, the almost infinite variety of the symptoms of disturbance of digestion in fully-grown people. You can not point to one sign or symptom as predominant. In the case of the infant it is true that the phenomena are presented in great variety, but there is one sign which asserts itself above all, that is *wasting*. The reason of this is not far to seek, dyspepsia in the adult is a disturbance of the normal processes of nutrition of the natural organism, an interference with the conditions of waste and repair, which in health are maintained in stable equilibrium. Dyspepsia in the infant is a disturbance, not only of maintenance but of destruction, a shock to the busy activities of growth and development, which has far-reaching consequences. Wasting is the expression of such dyspepsia.

We will imagine that an infant under a year old is brought to us with the simple history that it wastes. We observe that the face wears a look of anxiety and that there are signs of fretfulness; the superficial fat has disappeared to considerable extent from the limbs and trunk, the muscles are flabby and attenuated, but the abdomen is large and prominent, contrasting with the diminished proportions of the rest of the body. It is by no means unusual that the parents or nurses of an infant presenting these signs bring us a diagnosis ready made—the child is "consumptive." It has "consumptive bowels." I am afraid that it is possible that some young practitioners who have not had much experience in the cases of sick children, may incline to acquiesce in this pessimistic view. I am quite certain that the expressions I have quoted have had a very evil influence, and have done much to keep up the high figures of mortality in infancy. They lead to a policy of "laisser aller." The argument is in this wise: We know that grown-up people who are consumptive do not get well, this child is consumptive and must die soon, do what we will. So what is supposed to be inevitable is accepted. Do not adopt any such formula. You may possibly be inclined to the belief that the infant is the subject of abdominal tubercle. Let this be a last, not a first thought. The occurrence of tubercular changes within the abdomen in infants under the age of two years is rare, whilst wasting cases are very numerous. I know of no degree of wasting that may not be recovered from. I have seen cases where the emaciation had been so extreme that restoration seemed hopeless, and yet these became plump and healthy children. On the other hand, sometimes the wasting progresses to death. In such cases the post-mortem signs observed are briefly those of starvation, plus certain changes in the mucous membrane and the glands of the gastro-intestinal tract. Especially the lymphatic vessels in the wall of the intestine are enlarged and filled with cellular elements. There may be shedding of epithelium from the mucous surface and the villi. The wall of the intestines becomes atrophied and exceedingly thin. The mesenteric glands are found to be enlarged, but they present no signs of tubercle. In any case in which you are in doubt whether tuberculization is occurring, I consider that you obtain the most valuable evidence from the use of the thermometer. When tuberculization is in progress there are intervals, often very irregular, in which the temperature is markedly elevated; whilst in ordinary wasting disorder the temperature is generally sub-normal. To get good evidence the thermometer observations should be taken at four-hourly intervals.

The signs of wasting being present, it behooves us to search for the cause. First, is the arrest of nutrition or the loss of tissue an accompaniment or a legacy of an acute disease? Wasting disorder may attend *any* acute disease to which infants are liable, but measles is a very frequent cause. Carefully explore the lungs, for bronchopneumonia may be present with little or no evidence of respiratory difficulty, and the wasting may be thus explained. Or, secondly, a special disease or disorder of slower evolution, especially syphilis or rickets or both, may be the cause disposing to wasting. These we shall consider subsequently. Lastly, some error of alimentation, discoverable or unexplained, must be accepted as the cause of the decadence.

We will consider the cases in which there is no complication. The error of nutrition is the only discoverable abnormality, the case is said to be one of simple wasting. Such cases have been described as those of atrophy—a term not alto-

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gether free from objection, because etymologically it rather implies the absence or withholding of food, whilst practically it seems to suggest an incurable disease. A much better term, in my opinion, is that proposed by the late M. Parrot—athrepsis—by this term we mean the wasting, with many attendant symptoms, consequent upon dyspepsia in the infant.

The problem now is how to examine a wasting baby. You will carefully note the state of the mouth and tongue. You may observe (1) the white patches of thrush; or (2) the small circular or oval vesicles or ulcers known as aphthæ; or (3) an ulceration over the sites of the coming teeth; or if any have yet appeared, at the portions of gum adjacent to them; or (4) possibly a gangrenous condition of the mouth.

The patches of thrush which so much resemble coagula of milk upon the tongue, the buccal mucous membrane or the palate, that you endeavor to detach them but find them adherent, are, as is well known, constituted by the interlaced filaments of the fungus, the oidium albicans, together with masses of exfoliating epithelium. Thrush is manifested very commonly in the dyspepsia of infants, but it may be very transient. Though it does not occur upon a perfectly healthy mucous membrane, the crusts may be detached and, the nutrition of the child improving, no further development may take place. In most cases, however, there is a morbid condition of the mucous membrane which precedes thrush, a redness and dryness of the surface, and an acidity of the secretions. The oidium does not flourish except in an acid medium. An application, by means of a camel's hair pencil, of the glycerinum boracis, or of a solution of sulphate of soda is very useful to check the spread of the thrush. When the crusts are very adherent a solution of potash (ten minims of liq. potassæ in half an ounce of warm water) may be sprayed into the mouth by means of the hand-ball spray-producer with much advantage. But as the affection is chiefly important as a sign that all is not well with nutrition, so the most important point in its rational treatment is to restore the nutrition to the normal. The treatment of thrush is the treatment of dyspepsia. If the appearance of thrush continues throughout several weeks, the probability of the infant being the subject of congenital syphilis is very strong. Its manifestation in the earlier weeks of life is extremely common in syphilitic children; in such cases the crusts are generally of slightly brown, and not of a perfectly white appearance.

Aphthæ, which have frequently been confounded with thrush, are totally distinct therefrom. These are small vesicles, round or oval in shape, studded over the mucous surface of the cheeks, the lips and the tongue. Their vesicular character is not at all times manifest, because their walls become ruptured and small, defined ulcers only are observed. These little ulcerations are not covered by a detachable crust. While thrush occurs especially during the first few weeks after birth, aphthæ are seldom manifest before the age of six months, and there is a maximum prevalence between the first and third years, when thrush, except at the termination of exhausting disease is rare. Thrush generally appears in a dry mouth; it occurs chiefly at an age before the salivary glands have begun to secrete in any abundance; aphthæ, on the other hand, are generally seen in a moist mouth. If you pull down the lower lip so as to expose the mucous surface, you may often see the little vesicles or ulcers which otherwise might remain hidden; at the same time you observe that saliva trickles from the angles of the mouth. In thrush the breath has a sour odor; in the case of aphthæ it is more fetid. Aphthæ closely resemble the vesicles of herpes; in fact, I consider that the affection may be regarded as herpes affecting the mucous surface. In some cases aphthæ indicate only a slight disorder. A lotion of borax or of chlorate of potash applied by a camel's hair brush three or four times a day, or a mixture containing in each dose two to five grains of chlorate of potash will expedite their disappearance. The surface of each little ulcer may be touched with a point of sulphate of copper, but I do not advise you to apply nitrate of silver, which may produce too serious escharotic effects. The irritation of these ulcerations, trivial though they may be, has sometimes a serious effect upon the infant in producing a disinclination for food. A little jelly made simply from gelatine or isinglass, or a little of a thick solution of gum acacia placed in the mouth immediately before food is given, goes far to obviate the difficulty, for thus the little ulcers become coated over with a non-irritant film, and the food is taken without inconvenience.

In many cases, however, aphthæ, though unimportant in themselves, are indications of a severe wasting disorder. They may be the immediate precursors of stomatitis, even, as I have observed, of that special and dangerous form of gangrenous stomatitis known as noma—that is, they may be centres whence sloughing in greater or less degree may spread. In such cases severe cauterization is necessary to save the neighboring sound tissues from invasion.

To revert to our inspection of the infant's mouth. You may observe in the case of the wasting infant not thrush, nor aphthæ, nor the severe form of gangrene, but an affection which we will call *ulcerative gingivitis*. Portions of the gum are seen to be red and thick; on some parts of the surface there are dense exudations of grey or dirty yellow color, if such exudation is removed a red and bleeding surface is exposed. I have only observed this affection when teeth have already appeared, or when the coming teeth are prepar-

ing to pierce the gum. The ulceration often extends as a border close to the incisors, and causing loosening of these; the adjacent parts become inflamed also, so that the upper lip is swollen and protrudes, and its mucous membrane is covered by a similar exudation to that observed upon the gums. Fetor of the breath is marked, and salivation is generally copious. The ulceration is long in healing, and is an index of a markedly depraved nutrition.

Having noticed any sign of wasting disorder present in the mouth, you should now carefully examine the perineum. Never omit such examination in the case of wasting infant. You may observe upon the buttocks, and especially the neighborhood of the anus, a red blush of erythema, the color disappearing with the pressure of the finger. More frequently you may distinguish two zones, an outer of erythema, an inner presenting a more persistent color, and either moist with exudation or harsh to the finger, from an exudation which has become dry. The eruption is a combination of erythema and eczema. This is an early sign of mal-nutrition. When thrush is observed in the mouth the red eruption on the nates is nearly always seen. The popular notion is that the eruption *is* thrush—that the thrush has "run through" the infant. The truth is that both affections are consequent upon a morbid condition of the secretions; an unhealthy mucus is voided from the intestines, which becomes an irritant to the delicate skin. The eruption may be transitory; if the diet be conducted on rational principles, and if all causes of irritation of the parts be removed, the skin may speedily become healthy. The perineum should be well washed—not with soap of any kind, but with warm water with which a handful of oatmeal has been mixed. Drying should be effected first, and partially by the gentle pressure of a soft warm towel; secondly, by the free application of finely powdered Fuller's earth.

The erythema and eczema, however, may not disappear, but may take on worse characters. In many spots the superficial layers of the epidermis may be removed, exposing erosions which bleed or give off much moist exudation, the neighboring cellular tissue becoming edematous. The child suffers more, and becomes more fretful and wasting occurs more readily. Dyspespia may be the initial and the continuing cause of all these changes, but when you find the affections of the skin about the perineum protracted and severe, carefully consider the question whether the infant is the subject of syphilis. We shall approach this question subsequently. You will note that severe and destructive lesions of the skin in this situation may occur in the absence of syphilis.

As a local application when there is considerable abrasion of skin, I know nothing so satisfactory as lycopodium. The parts should be first washed with a weak tar solution—one drachm of Wright's liquor barbonis detergens in half a pint of warm water. Then they should be partially dried and then dusted with the lycopodium powder prepared in the following manner:

Take of pure carbolic acid [quantity omitted in the reprint]; of thymol or eucalyptol 20 grains; rectified spirit, half of fluid drachm. Mix and add gradually one ounce of lycopodium powder.

Leaving the cutaneous phenomena which attend the dyspepsia of infancy, we may briefly consider some of the special symptoms attending the disorders of the alimentary tract. Flatulence is a very frequent symptom; constipation occurs in some cases, but the most frequent, as well as the most serious symptom, is diarrhœa. In a large majority of cases diarrhœa is an early concomitant of the affection, and if it does not persist throughout it crops up occasionally. The actions of the bowels are observed to be irregular and frequent; the dejecta, instead of being of the color of the yolk of an egg and of uniform consistence, are watery, interspersed with whitish, greyish or greenish fragments, and have a sour smell. Frequently their color alters after expulsion to a green tint. In some of the cases of very young infants where alimentation has been faulty, you may find on the addition of a watery solution of iodine to the voided matter points of blue coloration indicating the presence of starch. These starch granules will be seen to be embedded in abundant mucus. At later stages of the diarrhœa you will find the motions become still more watery, with flocculi of undigested casein and dirty grey mucus here and there; the odor is most repulsive, suggesting putridity. Sometimes the expulsion of these evacuations is accompanied by pain, and takes place suddenly with violence; at others it is a mere passive flux. In this form of dyspeptic or apeptic diarrhœa the themometer indicates no pyrexia; on the contrary, the temperature is subnormal. The diarrhœa is not a disease, but a symptom; but it is the dominant symptom hastening the downward course, and often the determining cause of death. Efforts to check this form of diarrhœa by astringents are futile—the treatment must be directed to the dyspepsia on which the diarrhœa depends.

When wasting and exhaustion have proceeded far certain cerebral phenomena will be observed. The fretfulness and irritability of the earlier stages give place to torpor and lethargy. In some cases coma occurs, in others convulsions.

The signs and symptoms which I have described may be looked upon as pertaining to a definite disorder—they are the expressions of an arrest of normal nutrition. The phenomena manifest at each of the terminations of the mucous tract of the alimentary canal—the thrush, aphthæ and ulcerations in the mouth, the erythema, eczema, and abrasions about the perineum are not

to be regarded as separate diseases, but as effects of a first cause—dyspepsia of infants—athrepsis, in regard to treatment, it is most important to take this view of the matter; for to treat any of the subsidiary affections merely locally would be tantamount to endeavoring to cure the infertility of a poor soil by simply pulling up the weeds.

The premises are these: In an infant causes, determinate or obscure, have arrested due nutrition; the tendency is to denutrition—to death. The problem is how to re-establish a proper alimentation, an adequate assimilation. The first point is to rectify all that is in error in regard to the management of the infant; the second is, if possible, to hasten the supply of nutriment to the tissues, so that the normal rate of assimilation can be quickened and the loss made good. Errors of management and errors of diet are the great causes of infant mortality, but, unfortunately, under present conditions of life, all these errors are not capable of rectification.

Now, as regards general management. Fresh air and cleanliness of body are of the highest importance in the treatment of a wasting infant. The congregation of babies in nurseries or foundling hospitals is disastrous to life. The benevolent impulse of the public may receive a rude shock from such an assertion, but experience and figures prove the proposition, and it would be well if a scheme of decentralization of such institutions could be considered. It would seem as if the atmosphere of a chamber where many infants are tended became, in some special way, toxic, As a general rule infants are better treated as outpatients than as in-patients of hospitals, but they may be admitted for such time as is necessary to establish a satisfactory scheme of treatment; moreover, the *régime* inculcated serves as an education in first principles to those who have the life-management of the child. You will not err much if you teach that even the feeblest infant must be washed thoroughly and frequently, and that it should have a plentiful supply of fresh air. Infants do not catch cold so often as they catch dirt.

In the next place, as to feeding. It is, of course, of the highest importance to establish a rational alimentation. It is impossible in the limits of this lecture to enter adequately into the subject of the normal diet of the infant, but I will just indicate some of the, in my opinion, common errors. Supposing the infant is under the age of seven months, and suckled by the mother, ascertain whether any farinaceous messes are administered to supplement the maternal milk. If so, at once forbid them. It may be that, though exclusively nourished through the mother, the infant nevertheless wastes; in such cases let the removal from the mother be the last, and not the first thought. Endeavor to improve the health of the mother, and quicken her lactiferous powers. I find it a very valuable policy to induce her to drink a half pint of milk three or four times a day, a quarter of an hour before putting the child to the breast. Supposing the child to be between nine and twelve months old, partially suckled and partially fed with farinaceous food, cut off the latter absolutely and supplement with cow's milk diluted with one-third its bulk of water, in each bottleful of which, when hot, a tablespoonful of a firm jelly made from isinglass or gelatine has been dissolved.* Farinaceous food in the form of baked flour or the usual infants' food are not to be resumed until the signs of dyspepsia have passed off.

If the infant be not suckled but brought up by hand, I advise you to carefully examine the food which is administered to it. Observe the contents of its bottle and forbid all farinaceous additions. Especially note the state of the bottle, the tube and the nipple, as to cleanliness, and insist that it be always cleansed after using, with water to which a pinch of carbonate of soda has been added; then observe the condition of the milk preparation contained in the bottle, whether it has a too acid reaction, whether it presents curdy flocculi. Especially note the specific gravity of the fluid. In the case of cow's milk, properly diluted for an infant from one to nine months old, the specific gravity should not be below 1,020. In the case of condensed milk as diluted for the infant, the specific gravity should be between 1,025 and 1,030. Cautions have been frequently given against using too large a proportion of the condensed milk. One teaspoonful of the thick fluid is supposed to be sufficient for the quantity (about five ounces) usually prepared in the bottle. I have long been convinced that the error is generally the other way—the infant gets an insufficiency of milk elements. It is very difficult to accurately measure the thick, honey-like condensed milk in teaspoonful, but the best plan is to observe the specific gravity as I have suggested. If you find that it is too low, instruct the person who has charge of the child to increase the quantity. Of course, if you can teach the parent or nurse to observe the specific gravity for themselves, so much the better. I am of opinion that the condensed milk is by no means to be condemned in the case of infants under the age of five months, but afterwards there are objections to its use on account of the excess of cane sugar; then fresh cow's milk, diluted with pure water, or with lime water, should be substituted.

In some cases, though, a small minority, animal milks can not be tolerated. Sometimes peptonized milk will agree in such cases, or cream may be given according to the following formula suggested by Biedert:

Cream	One ounce.
Pure water	Two ounces.
Lime water	One ounce.
Sugar of milk	One drachm.

* Lacto-preparata, of Reed & Carnrick, or Mellin's will be found better.—EDS.

Or some of the well-prepared malted foods may be given. No farinaceous food, however, should be permitted under the age of seven months, and then in cases of wasting disorder, a farinaceous dietary should be approached very cautiously.

The mere establishment of a simple diet which agrees with the infant is often sufficient for the successful treatment of athrepsis. The scale is turned, little by little, there is gain of weight, and the difficulties are overcome. In other cases something more is needed; there must be an extraordinary impulse, elements of nutrition must be presented over and above the normal. Experience shows that the ordinary rate of tissue formation may by such extraordinary means be greatly increased. One of the most valuable additions to the ordinary food in cases of wasting infants is juice of meat. The directions which I usually give are the following:

Shred very finely raw beef, mutton or chicken, in such quantity as to half fill an ordinary tea cup. Then add pure cold water so that the cup shall be nearly filled. Let stand for an hour in summer (in a cool place), for two hours in winter. Afterwards place the cup in a basin-full of boiling water until the contents are fairly warm. Strain and squeeze through muslin. A little flavor may be given by boiling one or two cloves in water contained in a tablespoon and adding the flavored water to the beef juice. A very good plan, however, is to add the beef juice to the diluted milk in the feeding bottle. The meat juice should be thus made and administered twice a day. In some cases the meat itself shred to a pulp may be given instead.

Cod-liver oil is extremely valuable for the treatment of these cases. Even when there is progressive diarrhœa and ordinary methods of treating the symptoms fail, improvement frequently commences after cod-liver oil has been continued for a short time. For young infants the drops should be added to a little milk in a teaspoon, and then a little cloud of white sugar dusted over the surface. Thus the infant takes it readily. Or the following formula may be adopted for a child six month's old:

Cod-liver oil.....½ fluid drachm.
Pure glycerine.....10 minims.
Lime water to one fluid drachm.
Dose.—Half a teaspoonful to a teaspoonful.

When cod-liver oil will not agree, pancreatin emulsion may be given.

Nourishment may, however, be conveyed to the wasting infant by other channels than that leading to the stomach. Supplementary alimentation until such time as the normal processes reassert themselves, is a most important therapeutic method. Something may be done by inunction. Cod-liver oil may be rubbed into the skin, and there seems very good evidence that this measure is productive of benefit. Still more valuable, however, is supplementary alimentation of the rectum. Food administered by the rectum should be predigested or converted into peptone. The simplest way of making a meat peptone enema for an infant or young child is, I think, the following:

Shred raw beef or mutton, in bulk about two tablespoonfuls, add an equal bulk of water, and let stand about an hour, then add gradually four tablespoonfuls of milk, heated to boiling. When all is well mixed, the temperature of the mixture will be about 140° F.; then add a teaspoonful of liquor pancreatis and a pinch of bicarbonate of soda. Let the whole remain for six hours and then heat to boiling. Strain through muslin and preserve the liquid, which will suffice for several enemas.

A nutrient enema must be administered to an infant or young child very gently and gradually, but it is retained much better than *prima facie* considerations would lead one to expect. Not more than two ounces should be administered at a time. A ball syringe holding this quantity may be used, but the simplest and best method is to employ a small funnel or curved tube (such as is used for the application of leeches), to which a large, soft, flexible male catheter is attached. The catheter being gently introduced some distance into the rectum, the fluid to be injected is poured into the funnel; the latter is then elevated, so that the fluid enters the rectum chiefly by the force of gravity. The fingers are then used to express into the rectum the fluid remaining in the catheter. Then the catheter should be slowly withdrawn.

Still simpler than this peptone enema is the enema of cod-liver oil and milk, which I have used in many cases with very good results. This consists merely of equal parts of cod-liver oil and warm milk shaken together in a bottle till well mingled—it is of course administered in the manner previously described. I may be asked whether diarrhœa is a bar to the use of nutritive enemata, and the answer is, certainly not in all cases. In some there is a sedative effect on the rectal mucous membrane, and the irritability of the bowels manifestly subsides, but there are cases in which it is evident that the enemas can not be tolerated.

Tubercular Endocarditis.—At the autopsy of a boy fourteen years, dying from general miliary tuberculosis, M. Tripier (*Le. Prog. Med.*) found upon the superior face of the mitral valve granular vegetations of recent origin, as well as a tubercular nodule on the free edge of the valve. The frequency of endocardial vegetations in cases of miliary tuberculosis or pulmonary phthisis, and the morphological analogy of the lesions, show the existence side by side of an acute tubercular endocarditis and a chronic condition of the same nature. This etiology applies to most of the valvular lesions presenting in tubercular subjects. The marked antagonism between cardiac diseases and pulmonary phthisis is explained, according to the author, by the predominance of the lesions in one or the other organ. —T. M. S.

KOCH'S LYMPH, ITS SECRECY AND ITS RESULTS.

BY LOUISE FISKE BRYSON, M. D., NEW YORK.

IN November, 1890, the *New York Medical Journal* urged upon the medical profession the wisdom of patience and calm waiting for definite information in regard to the alleged cure for tuberculosis. It called attention to the fact that had the alleged cure originated in Anglo-Saxon lands, the circumstance of its being a secret would preclude its serious consideration by native physicians. Somewhat different views evidently prevail in Germany—a country, be it said *en passant*, that in spite of its many excellences has never been the world's law-giver in matters of taste and discrimination. And the *Journal* did furthermore exhort the exponents of medical ethics, learning and skill, not to be carried away by the great name and great genius of Robert Koch, whose observations always carry with them a universally admitted probability of truth.

But the voice crying in the wilderness was disregarded, and the medical profession fell into a kind of hysteria, at once pathetic and ludicrous. For fifty years nothing has approached the recent frenzy and agitation over an unknown quantity. The introduction of anæsthesia was a trifle in comparison. Men flocked round the alleged cure as to the standard of Peter the Hermit, in spite of the most humiliating conditions. All they like sheep went astray. Tradition and common sense were equally powerless to control their mad flight. Like a dream it seems now, like a tale that is told, yet a few weeks ago the medical pilgrimage to Berlin was a sad and painful reality, affording richness to men of the Tolstoi school who look upon all representatives of medicine as knaves, cheats and scoundrels, and constituting a source of real regret and sorrow to others who believe in the general dignity and honesty of the profession.

And now the *Asclepiad*, Benjamin Ward Richardson's able English Quarterly, lends its brilliancy and force to a consideration of the late medical secret. It takes up the theme where the *New York Medical Journal* left it off. It suggests that physicians, being indifferent honest, like poor Hamlet, should exercise the precious gift of charity, should suffer long, think no evil, and rejoice in the truth. Yet it objects seriously to a medical secret, for great minds in medicine resent as grossest insult the mere suggestion that in matters of life and death there should be traffic in something unknown and not understood. A poisoner might thank his master, the devil, for such a gift, but not loyal men and true. Imagine Baron Haller, Bichat, Sir Astley Cooper, Professor Gross, or Marion Sims, keeping a medicine or any remedial measure a secret! "Admit secrecy in the use of a medicine," asks the *Asclepiad*, "and where is secrecy to end? How are modern views of such a situation to be reconciled with the past abhorrence of the word and deed? A secret in medicine divulged—what a spectacle! As if medicine were not feeble enough already without enfeebling herself the more by making and then divulging secrets!" Hitherto the honorable physician or surgeon who has brought forward some new remedy made known its nature down to the minutest detail, why it was used in the first instance, and why he ventured to recommend it. If others approved after thoroughly understanding every particular, they also took up the research and quietly put to the test the alleged remedy, in turn relating their experience and communicating knowledge as one torch lights another. And the originator, the discoverer? Most likely altogether forgotten in the silent diffusion of the good it was his happy lot to set in motion, as unknown as the man who first used opium or iodide of potassium. Yet this same forgotten man remains crowned for all time with dignity and honor among the goodly company of the world's workers that left it better than they found it.

Reprehensible as is the existence of a medical secret of any kind whatever, mortifying as the recent paroxysm of confused judgment and hasty generalization must ever remain, the popular craze for curing disease by infection is a factor in the late unpleasantness that it would be unwise and unjust to ignore. As the quarterly points out, to common sense the whole proceeding of meeting one fatal malady by the implantation of another, is the *argumentum ad infinitum* in the treatment of disease. To sustain even artificially a *pestis bacillorum*, could such a thing be done, would be but to sustain pestilence in new and varied types and to afflict poor humanity with communicable disorders of a new character. Inoculation of this sort is nothing more and nothing less than bad sanitation. Though it might for a time show some specious appearance of success as a prophylactic, it would soon become impossible as a practice. The proposition has been advanced that medical men in time will be able to protect humanity from all contagious disease, by inoculating helpless mortals during infancy and childhood with specific poisons that are "pure" cultivations from diseased products! This would settle definitely the question whether life is worth living. Picture the horrible childhood that would grow out of such a practice, the curses both loud and deep that would follow the medical profession everywhere, and the wrathful indignation of the public whenever a death occurred! Compare the dangers and difficulties of such insane methods with the glories of a noble art that leads to health by the alert and vigilant ordering of human days, by the natural protection resulting from clean living in its widest sense.

Preventive medicine is of more value than charms and mysteries, than inoculation or other artificial protection from disease. It has already done away with many plagues supposed to be the inevitable heritage of mankind, and its possible scope is as yet quite outside the bounds of imagination.

To invent new disorders and new conditions of disease, and to implant them upon an already weakened system, is a vulgar and illogical process that invites death in some new and different form. This method of disorganizing vital forces is not the way to effect radical cures, for to cure disease is to place the organism under conditions most favorable to life, under conditions in which it can not die. Any other practice is worse than a crime, it is a blunder. There is but one nature, whether physiological or pathological. Disease is a unity of varied phenomena and very few aberrations. Twenty years ago, as Dr. Richardson says, the world was steering steadily and well toward great principles in medicine. Then crept in the wild enthusiasm for bacteriological research, good enough in its way as a piece of natural history, but a positive insanity when accepted as the one absorbing pursuit. It has ignored nervous function and separated the modern art of cure from the accumulated knowledge, wisdom and light of over two thousand years.

This craze for bacteriological research—the narrow view in medicine—is in great measure responsible, however indirectly, for the late medical secret and its unfortunate outcome. To what it has led in this particular direction, Germany now makes public. An official report has been issued by the German government, giving the results of the use of Koch's lymph in all the Prussian universities. There is an account of the treatment by over sixty physicians of 1,769 cases, of which number one-half were not improved at all and fifty-five died. An official document thus announces that the great medical discovery has shortened short days, dispelled fond hopes and aspirations, wasted time, money and generous emotions, filled the whole world with disappointment, and caused unspeakable mortification and chagrin to fully one half of the medical profession. Who can estimate with nicety and exactness the vast misery-producing power of the late medical secret? The problem presents much that is bitter and humiliating. Had ten righteous men been working in the daylight with the alleged cure for tuberculosis instead of hundreds experimenting blindly in the dark, the results of its action would have appeared earlier. Then the awful waste of life, of time, of hope, that now is everywhere deplored would in a measure have been averted, and regrets been less the order of the day. The evil done already through lack of wit belongs to the past and is quite beyond recall. But if physicians in the future are to turn conjurers trained by quickness of hand to deceive the eye, as Dr. Richardson puts it, let them avow their new calling and leave to men of larger mind and honest intent a profession that has to do with life and its glorious possibilities.

THE TEMPERATURE OF THE AIR THE CHIEF CAUSE OF THE FLUCTUATIONS OF MORTALITY.*

(Constitutio en-and epidemica.)

By A. Magelssen, Physician, Christiania, Norway.

Translated by Prof. Groth, Brooklyn, N. Y.

THE different climates, as it is well known, distinguish themselves by peculiar groups of diseases. Thus, *in the warmer climates* we find a frequent occurrence of diseases pertaining to nutrition and assimilation, such as anæmias, digestive and hepatic diseases, dysentery, furthermore certain specific infectious diseases, notably intermittent, yellow fever, cholera, plague, etc.

Other diseases chiefly occur *in the colder climates*, e. g., those numerous diseases arising from the influence of the cold, and the diseases situated in the respiratory tract.

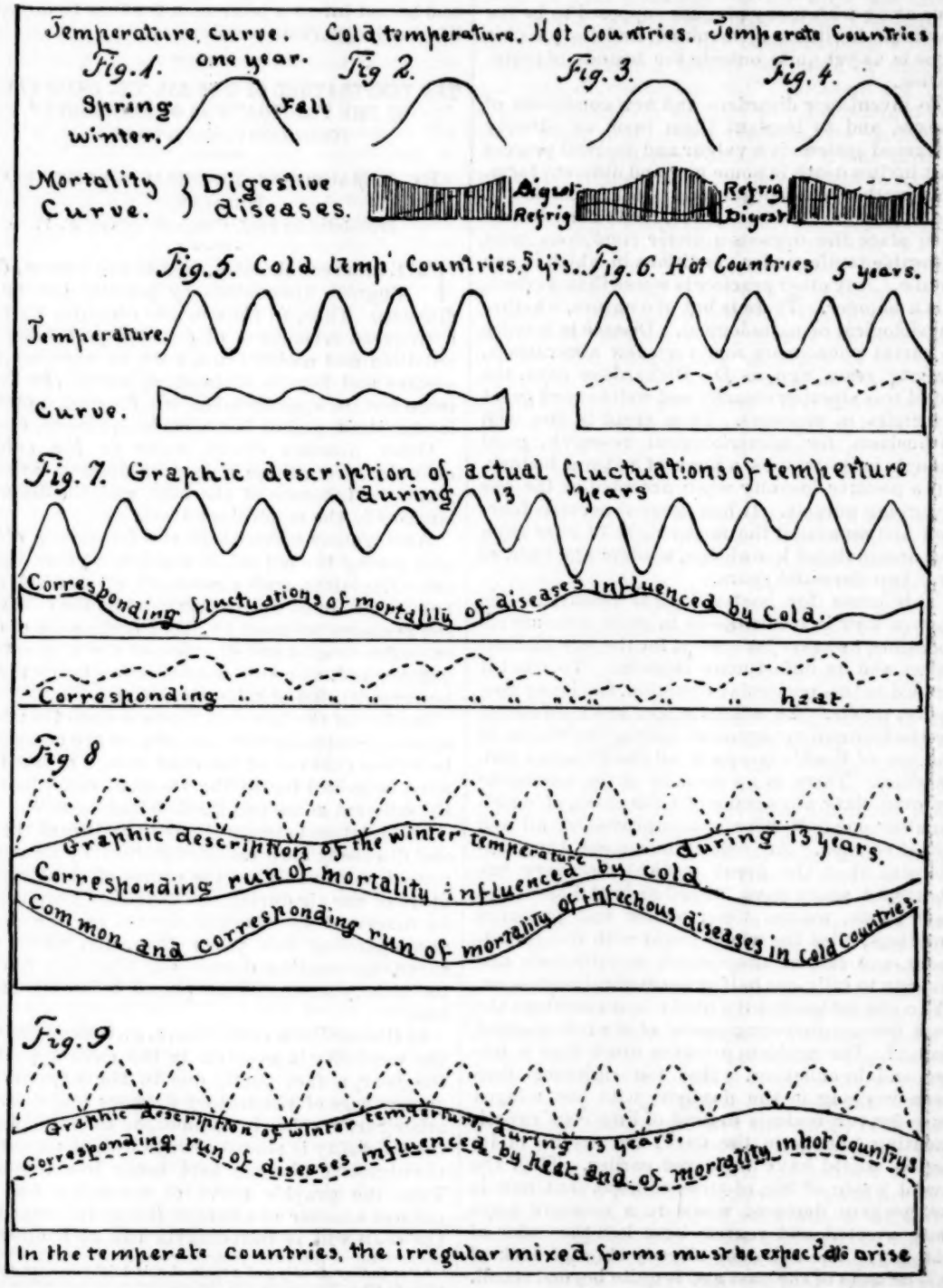
Analogously herewith in the *temperate climates* during the hot season and in hot years digestive complaints, such as catarrh of stomach and bowels, are most apt to occur, while the cold season presents the most frequent occurrence of diseases due to cold and diseases of the respiratory organs, and, as a rule, a greater frequency and a larger extension of epidemics.

In view of the fact that diseases upon the whole appear grouped in this manner, we are compelled to believe that one of the chief causes of this fact must be looked for in the thermal conditions of the different zones and the different seasons.

The relation between the temperature of the air and disease is most easily explained by means of graphic curves. Thus the course of the temperature of the air during one year may graphically be described by the line drawn on the table accompanying this paper (Fig. 1.), while the curve representing disease and mortality during the same year should be placed below the same line.

In the *northern countries*, e. g., in Scandinavia, the mortality is greatest in the coldest part of the year, a fact partly due to the greater frequency here of respiratory diseases and diseases arising from cold; in summer, on the other hand, the mortality is almost always less, on account of the digestive diseases here being less frequent. Thus the graphic curve of mortality for the greater number of diseases (those influenced by the cold) will in Scandinavia run in a direction

* For further details and proofs of this brief summary see the author's book: The influence of the weather on the production of diseases ("Om Sygdommenes Afhangighed af Veiriget," Christiania, 1889).


Temperature curve. one year.
Fig. 1.
Spring
Fall
winter.
Cold temperature. Hot Countries. Temperate Countries
Fig 2.
Fig. 3.
Fig. 4.
Mortality Curve.
Digestive diseases.
Digest.
Refrig
Refrig
Digest
Fig. 5. Cold temp' Countries 5 yr's.
Fig. 6. Hot Countries 5 years.
Temperature.
Curve.
Fig. 7. Graphic description of actual fluctuations of temperture during 13 years
Corresponding fluctuations of mortality of diseases influenced by Cold.
Corresponding " " " " " " " " " " " " heat.
Fig 8
Graphic description of the winter temperature during 13 years.
Corresponding run of mortality influenced by cold
Common and corresponding run of mortality of infectious diseases in cold Countries.
Fig. 9.
Graphic description of winter temperture during 13 years.
Corresponding run of diseases influenced by heat and of mortality in hot Countrys
In the temperate Countries, the irregular mixed forms must be expected to arise

opposite that of the temperature curve; while the curve describing those rarer diseases influenced by the heat takes a direction parallel to that of the temperature curve. Denoting the former diseases by an upper continuous line, the latter ones by a lower dotted line we get the graphic outline Fig. 2.

In the *southern, hot countries* it will chiefly be the heat that makes itself felt by the organism, and that exercises a predominating, injurious influence towards disease and mortality, while the influence of cold is less injurious, perhaps even favorable. Accordingly, the curve of mortality for those diseases influenced by the heat here will be the upper one, taking a direction parallel with that of the temperature curve; while the curve for those diseases influenced by the cold now will be the lower one, taking a divergent direction. For the hot countries, accordingly, we get the picture Fig. 3.

If in *temperate countries* cold and heat (winter and summer) alternatingly always had an equally great influence, then the curves—leaving Fall and Spring out of the view—would have the shape outlined in Fig. 4. But as in these countries now a summer, now a winter, may be very hot or very cold and thus resemble the season, now in a hot, now in a cold zone—something that also, generally speaking, applies to inland climates—the curve in the temperate countries will, accordingly, resemble now that of the hot (Fig. 3) now that of the cold country (Fig. 2). The mutual relation between the temperature of the air and disease, therefore, *in the temperate countries and inland climates, will much more frequently be less perspicuous than in the other two zones.*

If we, instead of one single year, take a series of years, then for the cold countries we get a picture like Fig. 5, and for the hot countries a picture like Fig. 6.

The temperature, however, during several years never or nowhere appearing in the perfectly regular manner indicated by Figs. 5 and 6, it results that the mortality can not keep such a regular type as indicated by Figs. 5 and 6. The respiratory diseases and those arising from cold must (upon the whole) necessarily increase when the cold increases and decrease when the cold decreases. And in the same manner the diseases of nutrition and digestion must decrease and increase with decreasing and increasing heat.

The real changes of temperature occurring in the different years are much more irregular than described by Figs. 5 and 6, they have, indeed, a much greater likeness to the outline drawn in Fig. 7, cold and hot years interchanging with each other in a manner apparently devoid of rule.

Provided the above-mentioned groups of diseases should follow such irregular thermal changes, then the mortality curves would rise and fall in about the manner indicated by Fig. 7.

Not only theoretical reasoning but also a detailed examination of those fluctuations of mortality which have actually occurred, demonstrates that the mortality curves in the cold and hot countries (as above indicated not always in temperate countries and inland climates) really have such a course.

Also the confused change of cold and hot years is very often only apparent. As I have shown elsewhere,* the years may be divided into groups (periods) of, as a rule, 3, 4, 5 years; during which time the winter temperatures of the different years (and very often in connection therewith the mean temperatures) rise and fall.

Sure enough, the rise and fall of the winter temperature of the different years appear in Fig. 7 to occur in a rather irregular manner. Drawing, however, a continuous line through the points of the lowest temperature, we get as a result the picture Fig. 8, which is much more perspicuous and regular, *indicating the greatest cold* to which the population has been exposed every year. And at the same time transposing the mortality curves in Fig. 7 to more straight-running lines, we get in the picture Fig. 8 a very plain idea of the chief features of the mutual relation between the fluctuations of temperature and of mortality.

Fig. 8 furthermore shows that not only the *respiratory diseases* and *those due to cold* in the northern countries are regulated by the fluctuations of temperature, but that also, and *still more so*, the *infectious* diseases in the northern countries are dependent on the same changes of temperature.

In the same manner it will also be gathered from Fig. 9 that both the mortality generally and the epidemic diseases (e. g., cholera) in the hot countries increase and decrease with an increasing and decreasing heat. This occurrence has its natural explanation in the fact that the infectious diseases everywhere are the chief contributors to the fluctuations of mortality.

The real basis, then, for the fluctuations of mortality, and, so it seems, for the fluctuations of a majority of diseases, in cold as well as in hot countries, is formed by the simultaneous or, more correctly, the *previous changes of temperature.* Under the influence of a higher or lower temperature are developed in the population the conditions favoring a greater or lesser susceptibility of the specific germs of diseases, whether contagious or not.

That the same rule applies to the temperate countries we have no reason to doubt, albeit that a direct proof here is more difficult.

In the manner here indicated we can best illustrate in the main outlines the intricate relations between the temperature of the air and diseases. We can not, however, expect always to

* "Meteorologische Zeitschrift," 1886. H. 6.

find these outlines reproduced with the same distinctness in the real life, partly on account of the frequent deviations of the temperature, especially in temperate and inland countries, partly also from the very natural reason that the other seasons (Fall and Spring) must be able to influence the mortality in a manner different from the one here indicated.

NOTE BY THE TRANSLATOR.

From a review of Dr. Magelssen's book by Dr. Walter Berger in "Schmidt's Jahrbücher:" "When Mr. Magelssen in the introduction to his book emphasizes how, at the present time in medical science, almost all interest is monopolized by the micro-organisms, and criticizes the exaggerations in this direction, the further course of his book gives evidence of the fact that he does not undervalue the real significance of the bacteriology. The micro-organisms require—he thinks, like all other germs—a prepared soil to live and develop their effects; there must then be *an unknown something* which makes the tissues of the body fit for this purpose. This 'unknown something' might perhaps have to be looked for in the outside conditions of life, and among these to a great extent, no doubt, in the weather, whose single factors, especially the temperature, exert an undeniable influence on the organism, as it is already sufficiently known through the experiences in the realm of the physiology, and from the science of the influence of baths and climates. Mr. Magelssen having in large outlines mentioned the thermal regulation and thermal economy, etc., he shows in the next chapter, which is of great meteorological interest, how it is possible in the apparently confused course of the weather to find a certain periodicity stretching over shorter or longer spaces of time, even over series of years, and he shows in what way the temperature of the air manages to exert influence in the direction of disease and mortality. The book abounds in interesting details, and bears witness of a thorough mastery of his subject."

LA GRIPPE.

BY EGBERT GUERNSEY, M. D.

LAST year scientists thought they had discovered the real cause of that epidemic, which starting in Russia traveled around the world and to which the name of la grippe was given, in the excess of ozone in our atmosphere from those electrical disturbances produced by solar convulsions which were marked by black spots on the sun's surface, and were said to be followed by cyclones and other indications of electric action. This year the epidemic is more violent, more prolonged, and attended with more varied and fatal complications, and while it goes over nearly the same track, meteorologists have discovered no great excess of ozone in the atmosphere, and astronomers no large increase of black spots on the surface of the sun. The pathologists and microscopists are looking with great zeal with analine colors and powerful lenses, to get hold of some malignant microbe whose ptomaines are producing all these aches and pains and nervous depression, but thus far without success.

We had forgotten that epidemics precisely similar to the one of last year and the present had suddenly broken out centuries ago, and traveled like this from east to west until they had girdled the then known world. Our earliest record of this form of epidemic dates from 1323. The old German custom of wishing a person good health when they sneeze is said to date from the epidemic of 1580 which spread over the world and was attended by great mortality. In Rome 9,000 persons fell victims to the epidemic, and so great was the fatality in Madrid that the entire city was nearly depopulated. It is strange that this form of epidemic is scarcely recalled now by even our oldest physicians, when in 1830–37, during the early professional life of many now living, the disease, starting then as now in Russia, followed the same course as the present, and was much more prevalent and much more fatal. That the disease is atmospheric is confirmed by occasional outbursts on the sea at the same time it is prevailing on the land, and we have abundant reason also to infer that it is infectious in precisely the same way as cholera—the living germs passing from one to another.

The nervous prostration following diphtheria differentiates it from every other disease, even when it is not sufficiently manifest from the direct symptoms, so the grip in its terrible effects upon the nervous system shows the malignant nature of the poison.

Starting usually with a high fever and bursting headache, with intense aching in every limb and muscle of the body, the grip settles down to its steady and most protracted work in an irritating racking and almost incessant cough, generally of a convulsive and nervous character. The general prostration and good-for-nothingness, and the great tendency to perspire on the slightest exertion, differentiates this trouble from ordinary cold or bronchitis.

During the first stage when the temperature often mounts to 105–6, with intense pain everywhere, we have usually been successful by getting a mercurial action upon the bowels with mercurius dulcis, and at the same time giving phenacetine in doses of ten grains every two hours, until the temperature comes down to 100–1 and the body is bathed in perspiration. With the lowering of the temperature and the perspiration the severe pain usually passes away. Bryonia and aconite are excellent remedies during this stage. This

treatment generally controls the febrile and painful symptoms within forty-eight hours, but the cough and sharp catarrhal symptoms which are very apt to follow the fever must be watched with the utmost care, lest suddenly and with scarcely any warning you find a sharp pneumonia set up in some portion of the lungs.

The irritation should be relieved and the expectoration encouraged by such remedies as stibium, baptisia, belladonna, rhus and the iodide and bromide of potash. Of the two latter remedies ten grains in four ounces of water given in teaspoon doses, in alternation with a chloroform mixture suggested by my friend Dr. Stewart, the skillful and energetic chief of staff of Ward's Island Hospital, have proved very beneficial. The chloroform mixture is prepared by putting a grain of stibium (tart. emet.) and a teaspoon of chloroform into four ounces of water. As the water takes up only a small portion of chloroform, the bottle should be shaken and the chloroform allowed to settle before each teaspoon is given. The inhalation of the oil of eucalyptus, carbolic acid, or the pine needle, vaporized in hot water over a spirit lamp, is always soothing and not unfrequently furnish prompt relief from the catarrhal condition.

We are inclined to think quinine, the universally accepted tonic, fails when given by itself to meet the conditions of general prostration always present, at least in this epidemic we have found it of but little use, but have derived greater benefit from arsenic, nux vomica, phosphorus, gentian, iron and cinchona either alone or in combination. A favorite tonic during convalescence has been an ounce of Peruvian or wild cherry bark in a quart bottle of water, of which a claret glass, to which is sometimes added from three to five drops of Fowler's solution of arsenic, is taken before each meal.

While the principal attack of this hydra-headed monster is upon the mucous membrane, yet through its action upon the nervous system it may touch every organ and every tissue. Sometimes we get a profuse watery diarrhœa closely resembling winter cholera without any general fever or severe muscular pain. The stools generally show an absence of bile, and our treatment commences with some active hepatic stimulant like mercurius, aloes, or podophyllin, until traces of bile are seen in the stools, when from three to five drops of the tincture of opium are given, repeated if necessary, every three or four hours. To this treatment is sometimes added dilute hydrochloric acid. By our laxative we increase the action of the hepatic viscera and sweep out through the intestinal canal any bacteria which may have been developed and their ptomaines and prevent their reforming by the acid, while in the tincture of opium given in this way we have one of the most delicate yet active and efficient nerve stimulants known in the pharmacœpia.

We have seen the "grip" develop some of the most severe forms of glandular swellings and acute suppurative celulitis we have ever been called upon to treat, and the attacks of pneumonia which are developed by it are usually more violent and severe than other forms of pneumonia, on account of the physical weakness of the patient and the great danger, even when they are apparently convalescing, that the heart may suddenly fail in its work. This was forcibly illustrated a few days ago in a lady who was brought down with a violent attack of grip which, in a few days, ran into a severe pneumonia. From this she was apparently recovering, having passed well through the second stage. She had been well nourished, and knowing she had fatty degeneration of the heart this organ was carefully watched. In the morning I found her temperature normal, pulse regular and showing no signs of failure, respiration natural and brain clear. Four hours after I was summoned by the nurse and found the patient almost cyanotic, pulse weak and rapid, but brain clear. Several doses of whiskey were given with hypodermic injections of digitalis. The heart responded promptly, the pulse became steady and the crisis was apparently over, though strict instructions were given to the nurse to keep up a careful watch. Two hours after, the patient was talking pleasantly with her brother who was sitting by her side holding her hand, when failing to answer his question he supposed her in a quiet sleep, and for nearly half an hour continued holding her hand. Startled at last by the still face and the slowly increasing coldness of the hand, he called the nurse and found his sister was dead and had probably been so for half an hour. In every variety and shade of this disease, whatever organ it may attack, or in whatever shape it may present itself, we must never forget that its grip is on the very sources of life, that it must not be neglected, but that every turn must be watched and every new development met promptly, and that above all the patient must be supported from the first to the last with tonics and stimulants when necessary, with food easily assimilated always.

TOO MUCH SURGERY.—A PROTEST AGAINST THE RECKLESS USE OF THE KNIFE.

By M. Yarnall, M. D., St. Louis, Mo.

A HECATOMB of women survive to tell the story of innumerable operations that have been performed on their wombs. They are heroines, benefactors to their sex. Scalpel's modification of Bisturie's operation has saved their lives, one week longer and they would have perished, but now they are useful members of society, all from the phenomenal skill of Dr. Volsella the great gynæcologist, "God save the mark." Not one in a hundred are necessary, these operations

on the womb are devised and perpetrated on the willing victim causing not a few deaths, invalidating many and seldom doing good. In three-fourths of the cases treated by the gynæcologist the local treatment is unnecessary. With bated breath the patient will describe her imaginary suffering, the doctor with "wise saws and modern instances" will review the case, how he acted, what he said and a lot of exaggerations, while in truth there is little aside from the aches and pains coincident to disturbed functions. The practitioner is not altogether to blame, the patient will have the operation "Nolens volens," it is done to satisfy the morbid craving, for some uterine treatment, the fashionable craze is yet on, and it will require time to modify it, the yearning of many women perhaps never will be satisfied until they are operated on. Let it be fully understood that the writer does not condemn surgical methods when necessary, but we will without fear assert that nineteen out of twenty of the gynæcological operations are unnecessary, many are criminal because the operator knows they are uncalled for, let us enumerate a few of those procedures that are to a greater or less degree passing into oblivion. The "bilateral" section of the os, the "antero posterior" section, the almost countless cases of laceration of the neck, all to be sewed up, "the murderous sponge tent" the elytrorrhaphies, etc., all of which are dead or dying except in rare cases. Many operations are performed by the desire of the patient, her condition is morbid, her nervous system disordered, some aches or pains in the pelvic region, some slight lesion, and the knife must be used, the gynæcologist yields, she tells her friends she must be operated on, the doctor has given her that chance to live and become once more a useful woman. She is a heroine, in ninety-nine out of one hundred no operation is necessary or justifiable, I tried an experiment some time since, I selected a number of uterine cases consecutively, not one of whom an operation upon was really necessary, but I suggested to each that perhaps an operation would be necessary or that it possibly would benefit them, and almost without exception they were willing, in some cases determined, to have something radical done "at once," "how soon will you operate." And I may add that several have been operated on but not by the writer. A year or two ago an eminent surgeon stated that he had never, or had his father, a large pratictioner, met a case that the laceration of the os was severe enough to require operative procedure. Now I regard this view as an error on the conservative side. There are many cases that it is absolutely required, in one notable instance occurring in my own practice, the woman had become insane, was from time to time placed in an asylum, she was radically cured by closing the lacerated margins of the os and is now a useful and happy woman.

It is to protest against these indiscriminate operations, that I am prompted to write. Only a few days since a splendid woman, healthy and with few aches or pains, consulted me as to whether she should have an abdominal section performed, the only lesion was some slight deposits that were being absorbed, the remains of an old pelvic cellulites, this woman was almost ready to submit and yet she asked "why should I have this done, I am not suffering to any great extent, I am in better health than for years?" This is an example. The suggestion was infamous, while the woman was intelligent she was almost ready to have this formidable procedure take place, perhaps she would become a heroine, the proud thought that she too, had had one of these great capital operations performed on herself. The abdominal surgeon should devote himself exclusively to that work and should be patronized, assisted and sustained by professional men. Above all he should be honest, and if it be possible to have relief afforded by other means, it should be done. At last when the operation is required beyond all question, let it be performed, not before. Now then what shall we do to relieve those patients, before the knife is resorted to. Treat the moral as well as physical condition. Resort to every known method before you mutilate, injure or perhaps destroy your patient, adopt all the various treatments including electricity, and placebos, change of the mode of living if it be possible, and try the various tonics that direct their action principally to the uterine system, and there are a number of excellent ones. I have no hesitation at this time in recommending "Dioviburnia," this useful combination stands first of all that we now have, and like all tonics no matter for what object they are exhibited, it will take time, and time is often the best adjuvant. A little less surgery, a little more conservatism.

DARWIN'S EXPERIMENTS ON DROSERA.*

By GEO. L. FREEMAN, M. D.

IN HIS autobiography, Darwin says: "In the summer of 1860 I was idling and resting near Hartfield, where two species of Drosera abound, and I noticed that numerous insects had been entrapped by the leaves. I carried home some plants, and, on giving them insects, saw the movements of the tentacles, and this made me think it probable that the insects were caught for some special purpose. Fortunately, a crucial test occurred to me, that of placing a large number of leaves in various nitrogenous and non-nitrogenous fluids of equal density, and as soon as I found that the former alone excited energetic movements, it was obvious that here was a fine new field for investigation."

*From an address by Dr. Galley Blackley, of Manchester, England.

Darwin followed up these investigations and gradually brought out results that greatly surprised and apparently troubled him. In writing to his friend Dr. Gray about some of his early experiments, Darwin says: "I have been infinitely amused by working at the Drosera; the movements are really curious, and the manner in which the leaves detect certain nitrogenous compounds is marvellous. You will laugh; but, it is at present, my full belief (after endless experiments) that they detect (and move in consequence of) the 1-2,880th part of a grain of nitrate of ammonia."

Later on, in writing to another friend, he says: "I had measured the quantity of weak solution, and I counted the glands which absorbed the ammonia and were plainly affected; the result convinced me that each gland could not have absorbed more than 1-64,000th or 1-65,000th of a grain. I have tried numbers of other experiments all pointing to the same result. Some experiments lead me to believe that very sensitive leaves are acted upon by much smaller doses."

Again, in writing a little later on in the same year to his friend, Sir J. D. Hooker, he says: "I have been working like a madman at Drosera. Here is a fact for you, which is certain as you stand where you are, though you won't believe it, that a bit of hair 1-78,000th of a grain in weight, placed on a gland, will cause one of the gland-bearing hairs of Drosera to curve inwards, and will alter the condition of every cell in the foot-stalk of the gland."

Thus Darwin went on from step to step carefully trying the effect of smaller and smaller quantities of ammonia salts. In a letter to Dr. Burden Sanderson, he says: "I must tell you my final result of which I am sure as to the sensitiveness of the Drosera. I made a solution of one part of phosphate of ammonia by weight to 218,750 of water; of this solution I gave so much that a leaf got only 1-1,552,000th of a grain; this being absorbed by the glands sufficed to cause the tentacles bearing the glands to bend through an angle of 180°." Again, in writing to his friend Asa Gray about the smallness of the dose of phosphate of ammonia that would move the tentacles, he says: "No human being will believe what I shall publish about the smallness of the doses of phosphate of ammonia which act."

Having been told by his son that Professor Donders had stated to him that so small a dose as the one-millionth of a grain of atropine would act upon the eye perceptibly, Darwin wrote to Professor Donders as follows: "Now, will you be so kind, whenever you can find a little leisure, to tell me whether you yourself have observed this fact or believe it on good authority. * * * The reason why I am so anxious on this head is that it gives some support to certain facts repeatedly observed by me with reference to the action of ammonia on Drosera. The 1-4,000,000th of a grain absorbed by a gland clearly makes the tentacle which bears the gland become inflected; and I am fully convinced that 1-20,000,000th of a grain of the crystallized salt (*i. e.*, containing about one-third of its weight of water of crystallization) does the same. Now I am quite unhappy at the thought of having to publish such a statement. It will be of great value to me to be able to give any analogous facts in support."

Professor Donders subsequently corroborated his statements, and Darwin fully confirmed the conclusions he had arrived at. But he even went beyond his estimate of 1-20,000th part of a grain, and calculated that if we deduct the amount of water of crystallization from the dose of the salt administered to each gland, the quantity of active material would be less than 1-30,000,000th of a grain.

In his concluding remarks on this part of the subject in his work on insectivorous plants, Darwin says: "There is nothing remarkable in the fact of one twenty-millionth part of a grain of the phosphate, dissolved in about two million times its weight of water, being absorbed by a gland. All physiologists admit that the roots of plants absorb salts of ammonia brought to them by the rain; and fourteen gallons of rain water contain a grain of ammonia, therefore only a little more than twice as much as the weakest solution employed by me." He then goes on to say that the wonderful fact is that 1-20,000,000th part of a grain (including less than one thirty-millionth of efficient matter) should cause the basal part of a gland to bend through an angle of above 180°.

Though the Drosera is apparently not endowed with a true nervous system, the action of the ammonia seems to have been the same as if a nerve tissue had been present in the gland. Darwin came to the conclusion that a continuous line of protoplasm served the same purpose, and transmitted motor power to the base of the foot-stalk of the gland. However this may be, the experiments furnish an excellent example of the action of infinitesimal quantities even on an organism that is low down in the scale of creation.

GELSEMIUM AND CHELIDONIUM.

By Prof. J. T. Kent, A. M., M. D., Philadelphia.

A MILD atmosphere is calculated to develop the complaints of gelsemium. They are the complaints of the South, the fevers of the South. They come on slowly, unlike similar conditions found in Northern cold climates where the onset is sudden and for which aconitum is the chief remedy.

Gelsemium and aconitum have some similar conditions and yet are widely different. They are both irritable and sensitive, but their strongest point of similarity is in their fear; and yet we notice that the fear of each has its marked distinguishing features. The fear of gelsemium is not associated with its inflammatory conditions. When

the fever comes on the great fear of gelsemium is not present. Aconitum, while in a high fever is fearful of death and predicts the very day he will die. Gelsemium has a cowardly fear that something evil is going to happen. The slightest noise, vexation or bad news brings on the fear, which is followed by paralysis of the muscles presided over by the spinal cord, causing relaxation of the sphincters and consequent involuntary stool. The gelsemium soldier on going into battle will be inconvenienced by an involuntary stool. The fear of aconitum may also be accompanied with diarrhea. In gelsemium the diarrhea follows the fear. Diarrhea *with* fear: aconitum. Diarrhea *from* fear: gelsemium. Argentum nit. has fear when getting ready for church or opera; looseness after exalted imagination.

Gelsemium has a tired brain, a sense of mental helplessness, inability to think, knows not what he reads, can not follow a sentence. This condition of the brain causes a nervous dread of appearing in public, for he is conscious of being unfit for mental exertion. A public speaker feels mentally tired and dreads the time when he shall have to give his address, for he knows himself to be unfit for the task. Gelsemium will help such a one. Lycopodium has loss of confidence in his own vigor. The lycopodium condition will probably have been long in coming on. Silicea has all the dread of an approaching task and the fear of failure which we find in gelsemium, but if obliged to perform it he will do so with perfect success. Silicea is a modest individual; he does not rightly appreciate his own powers.

In one of the most reliable provings of gelsemium a desire to throw herself from a height was brought out as a characteristic symptom. We are reminded of the suicidal mood of aurum but with gelsemium it is merely an impulse for the moment. Gelsemium dare not look over a height for fear he will throw himself down. Argentum nit. dare not look into a well for he has an impulse to throw himself in. Tabacum also has an impulse to jump out of a window. Silent grief with congestion in the head often calls for gelsemium. A husband loses his wife, and bears the loss without a tear or complaint, but the strain prostrates him and he has a congested condition of the head; gelsemium will help him. If a woman sobs and weeps and is hysterical from a similar loss, ignatia will be her remedy. Gelsemium has marked vertigo as in phosphorus. The vertigo spreads from the occiput over the head. Silicea has this ascending vertigo, from the nape of the neck over the head. The gelsemium child is dizzy and seizes hold of the nurse and screams when carried about, fears it will fall. The borax child screams when being put down into the cradle or from a sharp noise.

The head symptoms of gelsemium are all important. The most characteristic gelsemium headache is the neuralgic headache beginning in the upper cervical spine and extending over the head, worse at 10 a. m.

There is surging of blood to the head. The headaches come on slowly and the urine becomes scanty, and then a copious flow of urine will follow, which relieves the head.

Gelsemium and silicea headaches are very similar in some respects. They both come up the back of the neck and over the head and are both relieved by a copious flow of urine. The silicea is a more chronic headache, while the gelsemium headache often results from taking cold. Silicea is relieved by pressure, heat and bandaging. Gelsemium has congestive headaches from the heat of the sun like belladonna and glonoinum. Sick headaches coming on in the morning and increasing during the day worse from motion and lying down, and better from sleep and vomiting. Some of the gelsemium headaches are better from lying down.

In the proving of gelsemium, already referred to, when speaking of the mental symptoms, a peculiar sensation of the eyes rolling up and up all the time, was produced; the forehead felt as if coming down over the eyes, and the occiput was icy.

The gelsemium pains go up the spine; the belladonna headache goes down the back. Gelsemium has a besotted face, with heavy, dull, drowsy expression.

The characteristic stool of gelsemium is cream colored, but it has also the yellow typhoid stool. There is inclination to stool on being startled, which does not amount to the actual relaxation of the sphincter, which is often present in gelsemium after fright.

Gelsemium has certain very interesting and important symptoms in connection with pregnancy. The labor pains come on naturally and then suddenly cease and a pain shoots up the back to the head. This has been described in the following manner: each pain starts all right, but instead of extending around the abdomen and then downwards, it turns and runs up the back. Phosphorus has a darting pain up the spine from os coccygis to the head during stool. Lachesis has a pain going up the back in waves. In threatened abortion, where the pain goes from the uterus up the back, gelsemium will often stop it. In threatened abortion, with stinging, tearing, aching pain in uterus and ovaries, apis will probably be indicated. Gelsemium is often the remedy in cases of rigid os with pains running up the back. If the patient is suffering with awful pains low down in the sacrum, and the labor pains are feeble, and she wants the covers off, pulsatilla will be indicated, and should there be any rigidity of the os, it will remove it without any mechanical interference. In cases of rigid os, where the examining finger produces a burning sensation, carbo an. must be thought of. In these cases if the finger be pressed against the coccyx, as it is withdrawn the same sensation will be produced.

Gelsemium is exceedingly useful in certain cases of spasm of the glottis, laryngismus stridulus. The patient is in an alarming condition, demanding instant relief; give gelsemium or ignatia, whichever stands first in the indications. Moschus and laurocerasus are also sometimes indicated in this condition.

Gelsemium has a peculiar and very characteristic chest symptom. The patient keeps constantly moving, rolls from one side to the other in bed, and on being asked why she is so restless, will answer that she dare not keep still for fear her heart will stop beating.

Gelsemium is frequently indicated in those cases of remittent fever where after each remission the fever lengthens till it eventually goes into a continued typhoid state. The gelsemium fevers are often thirstless. Gelsemium has a febrile condition in the afternoon without thirst. Apis has a thirstless fever.

A paralytic weakness of the muscles is characteristic of gelsemium. The limbs are heavy; the patient is "so tired." The tired condition, both mental and physical, should always be looked for in gelsemium; it is very characteristic of this remedy. The patient staggers from weakness of the muscles.

Gelsemium has also a spasmodic side to its muscle symptoms, and is useful when indicated in hysterical and puerperal convulsions. It has the drawing back of the neck in spinal meningitis.

Gelsemium has a zymotic element and reaches many typhoid conditions and troubles arising from suppressed eruptions; spasmodic conditions associated with suppressed or scanty urine; epileptiform convulsions.

The copious flow of urine is the first indication of gelsemium's action.

CHELIDONIUM.

Chelidonium is a great liver remedy. It markedly prefers the right side of the body; its lung affections are on the right side, and it rivals bryonia for aggravation on motion.

Its mental symptoms are not strikingly prominent; it is full of sadness, depression and anxiety. It is "sad unto

weeping, and desponding on account of the present and future." It has a quiet delirium, chiefly at night, which is likely to be present in its hepatitis and pneumonia.

It has a vertigo, with bilious vomiting and pain in the liver.

In its headaches, as in many of its symptoms, chelidonium may be compared with bryonia, but it has more occipital and spinal pains. There is a pain in the orbits on moving the eyes. Bryonia has a headache coming on in the morning on opening the eyes. Chelidonium has a coldness in the occiput coming up from the nape of the neck (on motion) during rest. Its headaches are (in the open air, and here it differs from bryonia, in which remedy the headaches are) in the open air. Chelidonium has intense pains on top of the head, the vertex feels as if bruised. Vomiting of bile relieves its headache; in this it resembles sanguinaria, which is the great remedy for the common North American sick headache, which is always relieved by vomiting of food and bile.

Chelidonium has a few important symptoms in connection with the larynx and glottis. It has a choking sensation; the larnyx feels as if pressed upon. Dryness of the throat with hawking up lumps of phlegm.

The desires and aversions of chelidonium are pronounced, especially the longing for hot milk, which agrees with him. There is a fondness for vinegar and sour things, which, however, do not agree with him. There is a loss of appetite with general disgust for food, with nausea. He dislikes boiled flesh, has a desire for hot things, and dislikes cold things.

The stomach pains of chelidonium are better by eating. They come on when he is hungry and are relieved by taking something. Graphites has a pain in the stomach which drives him to eat something. Lachesis also has a stomach pain for eating, but returning when the stomach is empty again. Anacardium has a headache, which is better during a meal, but worse after. Iodium has a pain in the stomach, renewed by eating. Natrum carbonicum has gnawing pressure in the stomach, better from eating.

Chelidonium's abdominal symptoms are very characteristic; its bilious colic, its pains in the region of the liver shooting to the back, its retraction of the navel, and its sensation of constriction as of a cord around the abdomen across the umbilicus. The retracted navel reminds us of plumbum's characteristic symptom, a sensation as if the navel were drawn back towards the spine by a cord. Berberis has pains radiating like a star from a point over the region of the kidney in renal colic.

The clay-colored stool is the characteristic stool of chelidonium. We readily associate this condition of the stools with its liver complaints, and consequent absence of the bile which supplies the natural coloring matter of the feces.

Chelidonium has a spasmodic cough; nightly attacks of asthma: a tight girdle sensation in the chest, on the right side, a condition found in capillary bronchitis. The patient wakes up from a dream with a sense of suffocation, and râles are present.

It has violent stitching pains in the chest by motion as in coughing, like bryonia. The right side is always preferred.

The pains of the neck and back are all right-sided. "Doctor," says the chelidonium patient, "I have a pain just under my right shoulder blade; I have had it there for some time."

Chelidonium suffers from cold and blue finger tips, a symptom frequently in present liver disorders.

There is a class of patients who frequently need chelidonium. They are those sallow faced individuals who have attacks of liver trouble every little while, with awful constipation, loss of appetite and rapid emaciation. They wither in a day. Such patients are frequently found among women who have passed the menopause.—*Exchange.*

CLINIQUE.

THE DIFFERENTIAL DIAGNOSIS OF THE DISEASES OF THE KIDNEYS AND THE DIGESTIVE ORGANS.*

By C. E. Laning, M. D., Chicago.

CIRRHOSIS OF THE LIVER.

As we began the course with cirrhosis of the liver, we will first study the differential points which serve to distinguish this disease from others for which it may be mistaken. You should always have in mind the diseases which most closely resemble one another, even if you are not familiar with those which in rare instances may be confounded.

Hepatic cirrhosis may be mistaken for some one of the many diseases which produce hypertrophy of the liver, or atrophy of the same; or for diseases causing ascites, gastric or intestinal hemorrhages, or diseases of the liver causing a development of nodules on its surface.

Thus it will be seen at a glance that the diseases with which cirrhosis may be confounded are quite numerous and while as has been stated, so long as all the affections referred to are typical cases, the differential diagnosis will not be especially difficult, but when almost unheard-of complications arise the physician's skill will be taxed and all his knowledge of the organism anatomically and physiologically will be needed.

The diseases, then, from which we must be able to distinguish cirrhosis, are: Simple atrophy, acute atrophy, chronic atrophy, spurious cirrhosis, phosphorus poisoning, simple induration, red atrophy, syphilitic induration, cancerous induration, amyloid degeneration, fatty degeneration, hyperæmic hypertrophy, hydatids of the liver, hepatic abscess, cancerous tuberculosis, or syphilitic induration of the lymphatic glands in the portal fissure, embolism of the vena porta, pylo-phlebitis of the same vein, or occlusion of it as a result of pressure exerted upon it by cancerous or other tumors of the adjacent structures; tuberculous, or syphilitic peritonitis, coprastasis compressing the portal vein, or vena cava inferior, gall stones, catarrh of the hepatic ducts, and malarial or leukemic hypertrophy of the liver.

Now, we must be able to differentiate between cirrhosis and any or all of these diseases. Fortunately, only a comparatively small number of them resemble it closely, and hence are liable to be confounded with it. Still, as I have said, complications may arise in the course of any of these affections that will cause an unusual resemblance between them. Again, they are often like two railroad tracks which run parallel for a certain distance, and hence, if we can not follow them back or forward to their point of divergence, it will be almost impossible to say which goes to

* An abstract from *The Clinique.*

New York and which to New Orleans. In other words, diseases in certain stages may resemble one another more or less, whereas in an earlier or later stage there is a marked difference. This should impress upon your minds the importance and the necessity of making yourselves thoroughly familiar with the clinical history of your patients.

Let us first learn to distinguish between cirrhosis and other diseases causing enlargement of the liver, in short, those diseases most likely to be confounded with the hypertrophic, or first stage of sclerosis.

Cirrhosis and amyloid degeneration.—In both diseases the liver is enlarged; in the amyloid disease permanently, in cirrhosis temporarily. But in the early stage of these diseases this fact does not help us out, for we can not wait for the second stage before making our diagnosis.

The clinical history of the patient and the etiology of the case are of the utmost importance. Is there a history of heavy or long-continued spirit-drinking, of so-called high living as typified by the use of highly seasoned foods, the use of coffee and spices in excess? If so, this gives the case a strong bias toward hepatic sclerosis. On the other hand, is there present a history of long-continued or profuse suppuration of any of the tissues, particularly of the pulmonary or osseous? Is there a history of syphilis or chronic malarial toxæmia? If there be, then amyloid disease is far more likely to be the cause of the hepatic symptoms than is cirrhosis, even although in addition to the last named history there be added that of more or less alcoholic stimulation.

It is seldom that the liver reaches the degree of enlargement in cirrhosis that it attains in amyloid degeneration. In the former two or three finger-breadths is as a rule about the limit of increase; whereas, in the latter four or five inches are not uncommon. Of course if the liver has attained a great size at the time of examination, it would indicate amyloid rather than sclerotic change, but you must not lose sight of the exceptional cases in which cirrhotic disease causes more than the usual degree of enlargement, and the waxy less.

As to palpation, there is no marked difference to be discovered in this way between the two diseases in their earlier stages; in both cases the organ feels hard and firm, with a well-defined border. In the waxy liver as a complication, there will often be found amyloid degeneration of the kidneys. Consequently, the urine is usually profuse, light-colored, of low specific gravity and more or less albuminous. The urine in the first stage of sclerosis of the liver is also free and light-colored, but only with the rarest exceptions does it contain any albumen.

In making a diagnosis between these diseases the general appearance of the patient must be taken into account. Because of the usual origin of amyloid disease, the patient is much more liable to show evidence of marked cachexia than in the case of the cirrhotic patient, although later on this condition may be equally well marked in both diseases. As a rule, there is never any pain or tenderness over the hepatic region in waxy disease, while the reverse of this holds good for cirrhosis, and in making an examination this point should be remembered and given due weight.

As the diseases progress the differential diagnosis becomes easier, or should I say it *would* become less difficult, if it were not for the fact that a certain symptom arises, common to both diseases, which at the same time serves to mask those symptoms which are *not* common to both affections. The symptom referred to is ascites or abdominal dropsy. If it were not for this, then all difficulties in the way of differential diagnosis, so far as the two diseases under consideration are concerned, would be at an end so soon as the cirrhotic affection entered its second stage, or that of contraction. For inasmuch as the amyloid liver, as already stated, remains enlarged permanently (unless it be cured), so soon as marked contraction was demonstrated, then waxy disease could be excluded in favor of sclerosis. Unfortunately for the diagnostician, he may be called in only after the appearance of ascites, when it will be next to impossible, unless he be unusually expert, to ascertain by palpation or percussion the size or shape of the liver; whether it be large, smooth and elastic, or small, hard and nodular.

In waxy disease the dropsical state is more liable to be general than in sclerosis, or at least it is more frequently observed in the feet and the lower limbs prior to the appearance of ascites than is the case in cirrhosis, it being only in rare cases that the ascites does not precede any symptoms of general anasarca in hepatic sclerosis. In the size of the superficial abdominal veins more or less can be read pointing to the nature of the malady. Thus, in cirrhosis they are almost always greatly enlarged, and that, too, before any great degree of ascites has developed, while in waxy disease they rarely are greatly distended and almost never, to any noticeable degree, until the ascites is well marked. The reason for this is evident when you remember the pathology of the two diseases, as it has been given to you in my former lectures. In the cirrhotic disease the enlarged veins are due primarily to an obliteration of more or less of the radicles of the hepatic veins and the larger and smaller branches of the portal veins, and secondarily to the compression of the veins of the abdominal viscera by the peritoneal effusion occurring later on. The waxy disease causes the derangement of the circulation, upon which depends the dilatation of the superficial abdominal veins, almost or entirely through the abdominal dropsy to which it gives rise; hence, it does not

produce so marked or so early an enlargement of these veins as occurs in cirrhosis.

When the ascitic stage, if we may so call it, of these diseases has made its appearance, you see that of necessity we are compelled to base our diagnosis upon something other than the mere size or feel of the liver. The urine generally remains more or less free and light-colored in the amyloid disease, whereas, in cirrhosis, at this stage it is generally scanty, high-colored and loaded with urates, although the urea may be and usually is diminished in quantity. Albumin may now be present in the urine of the sclerotic patient, as well as in that of the waxy, this being due principally to the fact that pressure exerted on the renal veins causes albumin to appear in the urine.

No matter what the state or stage of the case its etiology must not for a moment be lost sight of if a correct diagnosis is to be made. Very generally in cirrhosis more or less jaundice is present, it sometimes being extreme; in waxy liver it develops in only a small proportion of cases and is then due not to a direct affection of the hepatic cells but to amyloid or syphilitic hypertrophy of the lymphatics in the portal fissure, causing compression of the hepatic or common bile duct. Many and large stigmata on the face are strongly indicative of cirrhosis as against waxy disease.

Hæmorrhages from the stomach and bowels occur in both diseases and likewise diarrhœa, but a persistent colliquative diarrhœa is much more indicative of amyloid than of sclerotic changes. While the presence of ascites, as has been shown, is one of the principal reasons for confounding the two diseases under discussion in their latter stages, it also has a certain amount of significance in a differential way. Thus while only about one-fourth of all cases of amyloid liver give rise to ascites, it is present in a much larger proportion of cases of cirrhosis, although it is not invariably present in this disease. Hence, when there is reason to suspect either of these two diseases, marked ascites preceding any dropsical effusion of the lower limbs is more suggestive of cirrhosis than of amyloid disease of the liver.

It will be seen from what has been said that under certain conditions an enlarged liver may be mistaken for a contracted one, *id est*, the symptoms produced by the one or the other may be quite similar. Sometimes it is necessary to withdraw the ascitic fluid by tapping before a diagnosis can positively be made.

If you will bear these points in mind you can make a differential diagnosis between cirrhosis and waxy disease in typical or uncomplicated cases, but there are certain miserable complications with which you will meet, and with which I must make you familiar. Thus, amyloid disease is liable to be complicated with syphilis, which so changes or modifies the disease that, unless prepared to meet it, you would not know what you had to deal with. Cirrhosis may be complicated with amyloid disease or with syphilis, giving rise to a series of symptoms which it will sometimes baffle you to interpret correctly.

THE ACTIVE PRINCIPLE OF PARSLEY IN AMENORRHŒA AND DYSMENORRHŒA.

A NEW substance, according to the Kansas City *Med. Record*, has been named *apioline* (*apiolinum*) by M. Chapoteaut, and clinical experiments show it to be the true active principle of the parsley.

Dr. Laborde* has made an exhaustive study of the action of apioline and its derivatives, cariol, etc., on animals, which indicates that it stimulates the circulatory system of the intestines and genitals, causing vascular congestion of the uterus and ovaries and exciting contraction of the smooth muscular fibers of the genital organs, especially of the uterus and ovaries.

Apioline chapoteaut administered in spherical capsules twenty centigrammes each, always relieved the pain in spasmodic and congestive dysmenorrhœa, cases in which principal reliance should be placed on equalizing the circulation and increasing the power of the ovarian nisus.

In amenorrhœa, where the menses had been suppressed even for a considerable length of time, the flow promptly reappeared.

In fact, all cases depending on uterine troubles amenable to internal treatment, and where a correct diagnostic of the symptoms had been made and suitable hygiene and treatment observed, this drug relieved the suppression, regulated and prevented or removed the accompanying pain, and proved to be the most powerful emmenagogue with which we are familiar.

In cases of scanty or deficient menstruation with pain, etc., one capsule can be given after meals, thrice daily for a week before the expected period, as recommended by Dr. Fordyce Barker.†

℞ Apiolini.....grm. IV. (about 3i),
ft. capsule No. xx (chapoteaut).

Sig.: Take three each day during the week preceding menstruation.

It is especially appropriate when amenorrhœa depends upon anemia. Although apioline is looked on as a specific for menstrual disorders by many gynecologists, it must not be forgotten that these troubles are often subordinate or associated with a general atony of the system, which requires tonics, hematics (ferrum sanguinis) and suitable hygienic agents. Finally *apioline-chapoteaut* can not be expected to remove dysmenorrhœa depending on mechanical obstruction of the cervical canal—causes of failure which are sometimes overlooked.

* J. Laborde, directeur des Travaux Physiologiques à la Faculté de Medicine de Paris.—*Trib ne Medicale*, January 8, 1891.

† See Shoemaker's Materia Medica and Therapeutics. Vol. II., page 447.

"CASE OF COCAINE POISONING."

BY FREDERIC L. BARNUM, M. D., CARLISLE, PA.

APRIL 5th, 1891.—Patient, male, aged thirty-seven. "Cowboy," married, good physical condition, but exceedingly nervous temperament. Nasal cavities present the following conditions: Right, occluded entirely by immense hypertrophies, so that no air has passed through in two years. Left, partial stenosis, due to the union of the superior and middle turbinated bones with the septum; entire absence of olfaction for over eight years. I had operated in the right nostril several times, removing considerable of hypertrophied membrane by means of the cautery snare, having produced perfect anæsthesia with a four per cent. solution of cocaine applied on a pledget of cotton. In the left nostril, I had previously separated the connection of the septum and middle turbinated bone, using a Bosworth saw. Instead of applying the cocaine on cotton, however, I injected a two per cent. solution into the membrane of the septum, and was able to accomplish my object satisfactorily to myself, with entire freedom from pain to the patient. Two weeks from the time of that operation, I found it necessary to use the saw again in the same nostril, on the opposite side, so I used the hypodermic syringe to inject a four per cent. solution. In less than thirty seconds he said he "felt faint," and getting up from the operating chair, walked to the sofa and lay down. His limbs became rigid, arms flexed on the chest and legs on the abdomen, but continuing so only a few minutes, when he began to talk of "some man" in the room beside myself, whom he apparently knew, begging me to take him off his chest so he could breathe; then that he felt him sitting on his feet, and when I told him that I had sent him away, he said, "Yes, there he goes." The pupils were widely dilated, accompanied by alternate fixed staring of the eyes, and a convulsive "rolling." I gave him about an ounce of whiskey, which he swallowed without difficulty, and made him inhale strong aqua ammonia. In about fifteen or twenty minutes, he sat up saying that he felt good, but did not know how he got on the sofa, or remember what he did afterwards, though I questioned him closely. Even refused to believe me when I told him of his "performances." A severe headache and toothache, of which he complained before the operation, had disappeared and he insisted on my proceeding with the operation. I accordingly finished the "sawing" which he said was painless. There was only a very slight hemorrhage, hardly staining a small napkin. After sitting in the office a few minutes, during which time he complained of a feeling of "numbness" in hands and feet, he walked to his home, and as I directed retired at once, *i. e.*, about 9.30 P. M. When I saw him the following day, he said he felt "fine," but did not sleep at all the preceding night, "for want of breath," as he was so "stuffed up." Had no bad feeling whatever in the morning.

In conclusion, I want to add just a few words, as an excuse to the TIMES readers, for taking so much of their attention. This is my first experience with cocaine, either in nose and throat or minor surgical operations, that I have had any toxic symptoms present, although I have used as much as 300 grains a week. In this as in other things, "familiarity breeds contempt," and I had also Dr. W. A. Hammond's frequently quoted opinion, of the impossibility of there being such a condition as a "cocaine habit," or that there was a toxic dose of the drug. It is for this that I beg the favor of impressing upon the profession the very great importance of exercising care in the use of so powerful a drug, and an equal necessity of individualizing each case where it is employed, before the discovery is made too late, that "one man's meat is another man's poison."

ARE VALVULAR DISEASES OF THE HEART CURABLE?*

BY E. M. HALE, M. D., CHICAGO.

THIS question has never been satisfactorily answered, nor do I presume to answer it. The therapeutics of cardiac diseases has not yet reached that stage at which we are warranted in giving a definite answer.

All valvular diseases, except the traumatic, begin with an endocarditis. This endocarditis is either rheumatic, or a secondary effect of disease of the kidneys. It may be caused by certain drugs.

If we are to seek a curative medicament for valvular diseases, we must find one or more which are capable, when administered to the healthy man or animal, of producing acute endocarditis. Not only must they be capable of causing the acute stage, but they must be the cause also of remote results.

The records of autopsies in fatal cases of poisoning are meagre in this respect. Fatal results from acute poisoning usually come on so soon after the ingestion of the drug that it has not had time to produce valvular lesion. To give you a graphic picture of what a drug may do, I will quote the classical experiment of Robertson, who, by injecting lactic acid into the peritoneum of an animal, caused the following pathological changes in the valves of the heart.

"Richardson states that when the animals experimented upon by him were examined within a period of ten hours after the introduction of a solution of lactic acid into the peritoneum, the tricuspid valve was found to be highly vascular and villous, to have lost its ordinary polish and transparency, and to have exhibited minute droplets of lymph upon the free margin. Examined at a somewhat later period the segments were tumid, and inadequate to close the orifice, and yielded an opaque and viscid exudation on being punctured. At a still more advanced period they were dense and thickened, but less swollen, and exhibited beneath the surface a layer of solid fibrin, and masses of the same material were deposited upon the edges. Finally, they were found to have shrunk and become inadequate by retraction of their edges. With regard to the genesis of the tissue changes which characterize the several stages of acute valvular inflammation, the first is dis-

* An abstract from an *Exchange*.

tinguished by congestion of the *vasa vasorum*, proliferation of the connective tissue corpuscles and consequent thickening and opacity of the valve curtains. The second stage consists of efflorescence, or outgrowth on one of the lamellæ, by accumulation of corpuscular elements, which are liable to undergo granular metamorphosis and subsequent disintegration and detachment under the action of the blood current. Hence, so called ulceration of the valve, if one lamella only be involved, or perforation, if both lamellæ are eroded." This is a very good picture of acute endocarditis with valvulitis.

Now, if we had the record of poisonous effects of medicines, which were closely similar to the above pathological changes, we should be able to cure the acute diseases with such remedies. If lactic acid when taken into the stomach would cause all of the above symptoms it would be the specific remedy for the disease. But, in the above instance, the acid was "injected into the peritoneum," which means, I suppose, into the peritoneal cavity. The question arises —what was the real agent which caused the inflammation of the valves? The lactic acid, may have been changed into some other poisonous product. It was once the theory —and is now held by many—that the presence of lactic acid in the blood is the prime cause of rheumatism. But this assertion has not been fully proven. When injected into the peritoneum, it should—according to that theory—not only cause valvulitis, but synovitis, and other rheumatic inflammations.

The main remedies for acute endocarditis valvulitis, are:

I. Aconitum, veratrum vir., cactus, kalmia and salicylate of sodium. These act, not by virtue of any power they possess to cause the disease, but by restraining the action of the heart and lowering the temperature.

II. Arsenicum, belladonna, bryonia, spigelia, are next in importance, because they *have* the power of causing similar lesions of the valves and endocardium.

One of Class I should be used in connection with Class II, as they are indicated by the symptoms. These remedies should be aided by the free use of alkaline beverages, and alkaline saline laxatives, to keep the intestinal canal empty of poisonous substances. When the acute inflammation has subsided, we have the results in the shape of thickening, or vegetations on the valves. To remove these, the most successful remedies are the iodides, principally the iodides of arsenic, ammonia, baryta, potassium, lithium, gold and silver, and the pure iodine itself. These should be used in the attenuations from the 1x to the 6x. I believe a careful and persistent use of these agents will enable us to restore the integrity of the valves in a large proportion of cases.

All valvular structural changes may be put in two classes:

I. OBSTRUCTIVE, causing narrowing or stenosis, and

II. INSUFFICIENCY, or widening of the orifice.

The results of both conditions are much the same. If the valves from swelling or vegetations cause obstruction, the chamber behind the narrow valve will dilate. The muscular structure of the walls of the chamber, in order to force the blood through the narrowed orifice, must exert unnatural force, which results in *strain*, and this strain tends to weaken the muscular fibers. This in time causes *thinning* of the muscle and we get dilatation. In Class II we have the strain, the thinning, and dilatation, not from the *vis a tergo* direct, but from the regurgitation of blood through the too open orifice, distending the chamber behind the diseased valve.

Unless arrested, this thinning may go on to extreme thinning and dilatation, until the muscular power is extinct, and cardiac paralysis puts an end to life. But nature, even if unaided by remedial agents, often prevents such a fatal ending, by a process which we call *compensation*. This is a restoration of the muscular fiber, such as we see in muscular atrophy from strain or weakness, under the influence of massage or the faradic current. When we discover that the heart walls are failing and dilatation impends, we must aid nature by the use of those agents which tend to restore the integrity of muscular tissue.

Nutritious foods, pure air, and proper exercise, should be aided by such remedies as aconitum, veratrum viride, veratrum album and gelsemium, in the 3x to 6x dilutions; or the purely cardiac tonics, such as digitalis, strophanthus, convalaria, anabolium, nux vomica, ignatia or strychninum in appreciable doses, until the muscular structures of the walls of the heart's cavities have atttained their normal strength. When this end has been reached, an equilibrium will be established, in which the muscular structure is strong enough to oppose the obstruction or insufficiency of the valves. The condition is called *complete compensation*. In this condition the valvular power is powerless to injure the important organs of the body. The circulation will become quite normal and the patient live comfortably many years.

We may not have cured the valvular disease, but we have rendered it powerless to destroy life. This is probably as near as we can arrive at the real cure of structural valvular changes.

RETROSPECTIVE THERAPEUTICS.

BY ALFRED K. HILLS.

Lycopodium in Enuresis.—Dr. G. E. J. Green, Ferns, Wexford Co., Ireland (*Brit. Med. Jour.*), states that in urinary incontinence, whether suddenly developed or of years' standing, no drug equals lycopodium clavatum. In his opinion the drug exerts an inhibitory effect on the detrusor and an anesthetic effect on the mucous membrane, thus diminishing the work of the sphincter. It also appeared to stimulate the liver and thereby lessen the work of the kidney and render the urine free from irritant products. Where the liver is at fault and there is an excess of lithates in the urine and flatulent bowel distension, then marked improvement followed the use of lycopodium. Harry Fenwick had had similar results in 1887. The drug must be triturated several times with milk sugar before an efficient tincture (the preparation used) can be prepared. The dose for an adult is twenty minims.

A Simple Means of Jugulating Cephalalgia and Facial Neuralgia.—Nægeli (*Cor. Bl. F. Schweiz. Ærtze*, June 15, 1890) reports that he has repeatedly cut short different forms of cephalalgia and odontalgia by raising the hyoid bone, or, which amounts to the same thing, the larynx, and keeping it raised for sixty or seventy seconds. Several *séances* are sometimes necessary, often but one, to obtain complete control over the various neuroses of the cranial nerves, and the cephalalgia resulting from excessive drinking. For the explanation of this phenomenon the author refers the reader to the anatomist or the physiologist.

Simple Method of Curing Obesity.—In a French journal (Paris correspondence *Jour. Am. Med. Asso.*) is announced the discovery of a means, as simple as it is strange, for curing obesity, which is attributed to a medical officer in the army. Thanks to this means, a colonel who was threatened to be obliged to retire from the army, as he was so heavy that it required two men to lift him into the saddle, became thin in a few weeks, and to such an extent that he had to take means to recover, in a measure, what he had lost. It was to his doctor that he was indebted for becoming a general. The means consisted simply in never eating more than one dish at each meal, no matter what that dish may be, and a person may consume as much as the stomach can bear, and satisfy the appetite without the least reserve. Nevertheless, nothing but the one dish should be taken; no condiments, or soups, or supplementary desserts should be allowed. This system was recom-

mended to a lady who was slightly obese, and who put it into practice with the best results. The lady observed that she suffered no inconvenience whatever from this diet, and the result obtained by the medical officer may be well understood, as she found by her own experience that the partaking of only one dish, whether it be meat, fish or vegetables, brought on a sense of satiety much sooner than if she had partaken of a variety of dishes, whence the effect of relative abstinence.

Liebreich's Treatment of Tuberculosis.—Prof. Liebreich, at a meeting of the Berlin Med. Soc., 1891, Feb. 25, described a method of treating tuberculosis by subcutaneous injections of cantharidate of potash. The treatment had been fully tested by himself and other physicians, with favorable results. The agent, cantharidate of potash, consists of a mixture of cantharidin, 2 10 of a gram, and hydrate of potash, 4-10 of a gram, diluted with a small quantity of water, and warmed in a water bath till the solution is clear. Then cold water is added till the whole amounts to one litre. The subcutaneous injection produces no pain, nor any secondary disturbance, large doses disturb the kidneys slightly. This innocousness of the remedy was confirmed by Dr. Bergmann. Dr. Frænkel declared that after the injection the bacilli were fewer; and Dr. Guttmann described a case of tuberculosis accompanied by inflammation of the eyelids which showed marked improvement under Liebreich's treatment.

Thexine in the Treatment of Neuralgia.—The *Medical and Surgical Reporter* says: Every now and then cases of neuralgia are reported which have been treated successfully by the hypodermic injection of theine. The local anesthetic action of this alkaloid was, we believe, first brought to the attention of the profession by Dr. Thomas J. Mays, about four years ago, who, from his experimental and clinical investigation, concluded that its physiological action is not identical with that of caffeine, and that its analgesic action is more prompt and more permanent in neuralgia than that of morphine or of any of the other agents in common use for the purpose of deadening pain.

Radical Cure of Nasal Catarrh.—Sir Andrew Clark recommended the application of glycerine and carbolic acid to the nasal mucous membrane as an effectual way of bringing about a permanent cure of that distressing and common affection, a cold in the head, by virtually destroying the membrane, the abnormal reaction of which to slight stimuli was the source of the mischief. Although he stated that it had given excellent results in his hands, we have not heard since of its having come into general use, possibly because, though a reliable, it was likewise a very painful and exceedingly disagreeable proceeding. An American physician, practicing in a country and a climate in which coryza is chronically epidemic, and among a race of men who have inherited the anglo-saxon proclivity to catarrh, has suggested a method, founded on a similar principle, which, however, is claimed to be equally effectual and painless withal. He recommends the application by means of a plug of cotton-wool on a suitable stem, of solutions of chromic acid, varying in strength from one to ten per cent., the former being powerfully astringent and the latter not less powerfully caustic. He points out that in proper strength chromic acid instantly combines with gelatinous and albuminous substances to form a tough, leather-like compound. It is essential to operate with a perfectly pure acid, or pain will otherwise be felt. He recommends giving a 1-200 of a grain of atropine shortly before making the application, in order to lessen the flow of mucus. The parts are then carefully examined and the sensitive spots mapped out for the subsequent application of acid in from five to eight per cent. solution. It is advised to operate on the two nostrils separately.

Banana-Juice for Chronic Bronchitis.—The juice of bananas is recommended as one of the best remedies in chronic bronchitis with insufficient expectoration and marked dyspnea. Bad results have never been observed to follow its administration. A drachm eight or ten times a day during the first days is usually prescribed, and later the dose can be diminished. The syrup is prepared as follows: Cut the fruit in slices and place them in a glass jar; sprinkle with sugar and cover the jar, which is then enveloped in straw and placed in cold water, and the latter is heated to the boiling point. The jar is then removed, allowed to cool, and the juice is poured into little bottles.

Antipyrin for Erysipelas.—Dr. Favre, of Fribourg (*Brit. and Colonial Druggist*), relates an unusally severe case of erysipelas, showing the high curative value of antipyrin. A woman, aged thirty, suffered facial erysipelas accompanied by somnolence, vomiting, constipation and high fever. In spite of the local application of cold, carbolic acid, ichthyol, corrosive sublimate, strips of adhesive plaster, etc., the morbid process gradually spread over the scalp, neck, chest, upper extremities, abdomen and buttocks. On the tenth day the administration of antipyrin was commenced, with the result that fever at once markedly decreased, the patient's subjective state greatly improved, and the erysipelas soon ceased to spread.

Chloride of Sodium in Pleurisy.—In the *Vratch*, No. 46, 1890, p. 869, Dr. Nikolai P. Ossovsky, house physician to the Tobolsk Military Hospital, Siberia, writes that, following the recommendation by Dr. O. A. Levonovsky, of Omsk, he tried chloride of sodium in five cases of obstinate stationary exudative pleurisy, the treatment being commenced after the subsidence of fever and other acute symptoms. The remedy was administered in the shape of a solution, made of one and a half drachms of the salt and six ounces of water, the dose being a tablespoonful every two hours. The patients' daily dietary consisted of 1,300 grammes of milk, from 209 to 400 of water, 620 of bread, and 200 of cutlet. In all the cases a complete absorption of the effusions took place in a week or so. Dr. Ossovsky lays down the following propositions:

1. Chloride of sodium undoubtedly promotes the absorption of stationary pleuritic effusions.

2. The beneficial effects should be attributed partly to its markedly increasing invisible losses of water through the skin and lungs,—partly to its improving the general nutrition of systemic tissues and composition of the blood.

3. Under the influence of the chloride, the patients' stools become regular and normally constituted (soft, etc.), while previous to the treatment they are irregular, and either abnormally dry or fluid.

4. The chloride does not possess any diuretic action whatever.

5. During the period of absorption of effusions, the urine may frequently manifest some tendency to alkaline fermentation, which is dependent upon an increasing elimination of phosphatic earths.

According to Dr. Ossomsky's theory, exudative pleurisy represents a constitutional disease, and correspondingly requires a general treatment. In the majority of cases, the pathogenesis of the affection is probably identical with that of rheumatism.

Salicylate of Soda in Pleurisy With Effusion.—Aufrecht and Tetz (*Therap. Monatsh.*, July, 1890) have treated a number of cases of pleurisy with effusion by the administration of salicylate of soda. The dose for adults was one gramme; for children, less, according to age. From four to six grammes were given daily. Its administration should be continued for a week or more after the inflammation has subsided. Since using this drug they have in every case succeeded in producing absorption of the serous effusion. They also look upon the drug as a diagnostic agent, for, when the fever does not yield to its influence in a few days, or the diuresis increases, they are aware that the effusion is a purulent one. In fresh cases recovery takes place within a few days. No injurious effects were noticed from the drug.

The New York Medical Times.

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NEW YORK, MAY, 1891.

MICROBES.

IN THESE days, when science is tracing the cause of the most fatal forms of disease to microbes, we should not forget the quiet remark of Dean Swift when a dog was accused by the cathedral chapter of disturbing clerical sleep with nightly howls, that before passing judgment he would like to hear what the dog had to say. Before putting all microbes under the ban, if we study closely their work we shall find some of them very useful as scavengers and in commerce. Prof. Crookes says, in the *Forum*, that the decomposition of dead organisms into their components depends mainly on the action of microbia which break up blood, flesh and even leaves and wood into carbonic acid and ammonia. Living organism convert the ammonic into nitric acid which, if potash is present, forms saltpeter. By a due selection of different ferments—all of them living organisms—we can produce a solution of sugar or a decoction of malt or alcoholic liquors, having the actual aroma and flavor of the most delicate wines. The delicate fruit essences so much sought after in confectionery and in liquors, resembling the flavor of the pineapple, the banana, the pear and the apple, are not unfrequently the work of the microbe changing dead, rotting matter into the most delicate flavors. The odor of the rose, of cinnamon and musk may be evoked by these little microbes by changing the atoms of the molecules of the most offensive forms of animal excretions and of dead matter, so that they give out an odor and flavor which can not be distinguished from the natural products. An artificial musk recently obtained not only gives off the exact odor of the natural product, but is said to have the same medicinal action, and as the musk deer is fast dying out it is fortunate the chemist has been able so far to imitate the perfume and the stimulant of his secretions that the ladies and the physician can get along without him.

"Much doubt," says Prof. Crookes, "has existed concerning the ultimate source of the combined nitrogen that exists in plants and forms a necessary item of food. Some chemists of the highest eminence have claimed that while plants are capable of absorbing and fixing in their tissues the ammonia and oxides of nitrogen present in the atmosphere, they are incapable of utilizing the free nitrogen that exists in such vast quantities in the air. This question is not merely of deep theoretical interest as relating to the balance of life upon the globe, but it is of supreme importance to man on account of its reference to the fertility of the soil and to our future supply of food. It has been clearly demonstrated in Europe, that the yearly amount of combined nitrogen brought down upon an acre of soil by the agency of rain and dew, does not make up for the quantity taken away in the various crops. Hence, if we return to the land all the animal and vegetable refuse into which its products are alternately converted, the fertility of any given plot must in the long run decline, unless in some manner a portion of the free nitrogen in the atmosphere is absorbed and rendered available for the nutrition of plants. Practical agriculturists have long since reached the conclusion that certain green crops, such as peas, beans, lentils and vetches are not so exhaustive to the soil as wheat, maize, turnips and potatoes. If we examine the rootlets, say of kidney beans, we find them studded more or less thickly with small knots of tubercles, which are the abode of a special kind of bacteria. These bacteria have the power of fixing the free atmospheric nitrogen in such a manner that it may serve as food for the plant. Accordingly, if we sow a field with such vegetables and plow them into the soil, at the end of the season they prove efficient fertilizers. On the other hand, if the formation of these tubercles on the roots had been prevented, the plants do not flourish and the soil is not enriched."

Our respect as well as our fear of microbes will be increased when we fully realize that the changes of the atoms of the molecules constantly going on in apparently dead matter, and their re-creation into active, blooming, vigorous life, is the result of the various forms of bacterial organization, while the ptomaines thrown out in the recon-

struction may be detrimental to human life or among the most valued contributions to the arts or our list of remedial agents in disease. All of the vegetable alkaloids, such as morphine, strychnine and atropine, are so reproduced in ptomaines that their physiological action can not be distinguished from the drugs whose action they simulate. The study of life and death is the study of ever-changing atoms in those molecules which build up the structure of vegetable and animal life.

A NEWSPAPER ATTACK ON MR. REICH.

A SINGULAR instance of persecution has recently been practised by the city editor of an evening paper against Mr. Lorenz Reich, the renowned dealer in Hungarian wines, the true animus being apparently zeal for a rival in business.

Our readers were doubtless as much surprised as we, to see a respectable newspaper repeatedly stooping so low!

No business has ever had higher encomiums from the best people than Mr. Reich's, and it is a great responsibility for the editor of a lay newspaper to condemn Mr. Reich's wines and all those who have endorsed them so nonchalantly!

If we inquire for authority, we are referred to the Austrian consul, who is, it is intimated, a party in interest in the Hungarian Government Wine Co.—whatever that may mean.

As there is no Hungarian government, there is deception on the very face of this rival enterprise.

We have personally called upon Mr. Reich for an explanation of this tirade against him, and his solution embraces attempts at blackmailing and other similar devices to get the best of him.

The editors of this journal have used Mr. Reich's wines in their own families and prescribed them to numerous patients for the past sixteen years,* and they have yet to hear of the first complaint as to their quality.

We are pleased to see from the following letters already made public that others agree with us in our estimate of these delicious health restoring wines:

[Copy.]

The Evening Post, New York, Editorial Rooms.
JANUARY 24th, 1891.

DEAR MR. REICH,—Please send me another dozen Budai and charge to my account. I have used this wine almost constantly for the last six years, and although I have in this time tried various other kinds of French, Hungarian and American wines, I have always come back to yours as being the best I could buy for the money. My family also like it better than the other kinds I have tried. The Tokay I have found as good as any medical tonic and much pleasanter, when I was fatigued by excessive brain work or loss of sleep. Two years ago, when I was in the Berne Hospital, in Switzerland, suffering from typhoid fever, I was on the point of cabling to you for a case of Tokay, because I could not find any medicinal wine half as good in Berne, but finally found an Italian wine which suited me, although I had to send to Coire for it. I have gained thirty pounds since using your Budai, and although, of course, I do not attribute *all* this to the wine, I am sure it had much to do with my gain. Hoping you and Mrs. Reich are well, I remain,

Yours very truly,
HENRY T. FINCK.

Hon. Carl Schurz, formerly the editor of *The Evening Post*, in a letter to Mr. Reich, dated November, 1883, says:

"I am ready to endorse every word Mr. Longfellow said about your Tokayer Ausbruch."

He referred to the letter dated Jan. 29, 1882, which reads as follows:

"Surely, neither king nor kaiser ever tasted better. It is a delicious wine, and has all the health-giving properties attributed to it by the medical faculty."

That these wines have not deteriorated, no better testimony can be offered than that of Prof. Alfred L. Loomis, M. D., who says:

"As the years go by I am more and more convinced that your choice wines are one of our greatest means for restoring the sick to health. . . . Yours is the best. It grows better every year."

The most eminent medical men in the country thoroughly agree with this estimate.

Prof. A. J. C. Skeene, M. D., says:

"May your days be as full of happiness and sustaining power as your unrivalled wine. Long may you live to aid the doctors in restoring exhausted humanity—the doctors included—(much the better for the cup that cheers but not inebriates)."

Mr. Reich assures us that he is prepared to bear the expense of comparison of any wines in existence with those he sells, and if any better can be found, he will have them at any cost.

He is willing to pay one hundred dollars for a bottle of Tokayer Ausbruch which can be proved to be superior to that which he sells for $30 per case. He will also make contracts under bonds to import direct to the consumer if desired, Tokay wine in bulk, at $6 per gallon, equal in quality to that generally sold in the market by the trade.

Those of our readers who are interested should call on Mr. Reich for the purpose above indicated.

It is claimed, upon the best authority, to have

* Even in cases where no other wine or even food or medicine would be tolerated.

prolonged the lives of some of the most prominent men of the century, such as Garfield, Grant, Bryant, O'Conor, Cooper, Dom Pedro, Gladstone, Coleridge and others.

Mr. Reich and his most worthy partner—his estimable wife—have lived in our midst for sixteen years, and we have had ample opportunity to judge of their sterling qualities, and so far as we know they are above suspicion in any respect.

We are satisfied from evidence shown us, that there is not a shadow of doubt as to the origin of these wines, and that every drop of wine sold by Mr. Reich is not only imported, but is just what it claims to be, and our readers may rest assured of this fact!

VITAL STATISTICS FOR 1890.

THE report of the Health Department for the past year shows an improved sanitary condition of the city, a decreased death-rate, and a marked reduction of infant and juvenile mortality. The number of deaths during the year 1890 were 40,103, the death rate being 24.58 per thousand as against 25.66 in 1889. The death rate has steadily decreased from 26.41 in 1880 to 24.58 in 1890. The percentage of deaths in infants and children under five years of age has been very marked. The question of the prevention of tuberculosis is discussed in the light of recent discoveries; that prevention the report believes, resolves itself to one for the avoidance of tuberculous meat and milk and the destruction of sputum of persons affected with the disease.

There has also been a general decrease in the number of deaths from contagious and infectious diseases, due to a more stringent sanitary supervision. There were 408 deaths from scarlet fever, as against 1,242 in 1889; 1,262 deaths from diphtheria, against 1,689 in 1889; 352 deaths from typhoid fever, against 397 in 1889. The number of cases of small-pox (all received from Quarantine) were five in 1890 and two in 1889. Two cases proved fatal in 1890 and one in 1889. Measles shows an increase from 6,443 in 1889 to 9,044 in 1890, with 730 deaths, as against 470 in 1889. The total number of vaccinations during the year was 92,047. Among the dead animals removed from the streets were 23,094 cats and dogs.

The report states that "the salient feature in the mortality records of the year was the epidemic or influenza." The number of deaths from January 3 to January 11, 1890, was 1,424, the largest number ever recorded in this city in a single week since 1865, with the exception of the week ending July 6, 1872, a period of intense heat, when the deaths numbered 1,591. Of the deaths classified as due to influenza there were 314 during the year 1890. Of these 264 died in January. Of the 314 deaths, 306 took place during the first quarter of the year, including fifteen, attributed solely to grip. During the year there were twenty-three deaths attributed to grip alone, in addition to the complications already noted. The epidemic took the most serious form among adults. Of the total number of deaths (40,103) 24,736 were of persons born in the United States. The cause of the greatest number of deaths was pneumonia, 4,989 deaths resulting from this disease, of which 1,111 occurred in January.

The reduction in the death rate, especially among children and in the tenement house district, is due in part to the watchful care of the Board of Health in their intelligent use of the large power intrusted to them. But back of the Board of Health has been a strong public sentiment appealing to the people and to the legislation, for the protection of the public from the seeds of disease scattered broad-cast from dirty streets and rotting manure, and the stench from slaughter-houses, chemical works and their surroundings. In abating these nuisances and in giving us cleaner streets and better pavements, "The Ladies' Health Protective Association" has been a powerful agent for good in bringing the matter earnestly before the public, and keeping it there until the attention of the entire community has been directed to abuses and evils in such a manner that they are moving on steadily towards the remedy. With rapid transit, decent pavements and cleaner streets, and an abatement of foul odors which science can at any moment reach, New York and its suburbs will, in a few years, become the most healthy and beautiful city in the world.

GOLD AND IODINE IN TUBECULOSIS AND PHTHISIS PULMONALIS.

SEVERAL years ago Dr. Donaldson, then residing at Portsmouth, N. H., carried out for several months and on many patients a series of experiments with hypodermic injections of iodine and chloride of gold and sodium for the various forms of scrofulous dyscrascea and tuberculosis with marked beneficial results. We hope at a later day to give to the profession Dr. Donaldson's notes on these experiments. Chloride of gold has long been used in certain forms of tertiary syphilis with very marked curative results, while the action of Churchill's preparation of iodine in chronic bronchial and lung troubles is familiar to all.

We have been very much interested in an arti-

cle in the April *Therapeutic Gazette*, by Profs. Gibbes and Shenley, giving the results of their observations in the treatment of phthisis pulmonalis with iodine and gold.

The authors start with the theory that general tuberculosis and phthisis pulmonalis are entirely different—the one a general disease in which the anatomical lesions may be found in every organ of the body; the other with anatomical lesions, principally and primarily in the respiratory apparatus; the final course of the form is depending upon a destructive taking the place of the constructive metobolism, and concerning the bichemical actions belonging to either protoplasm nuclein or chloromin, or all combined and depending upon either hereditary or acquired tendency to elemental forms of nutrition; these resulting in the formation of chemical poisons known as toxalbumoses.

Phthisis pulmonalis is an inflammatory process of greater or lesser degree or extent, resulting in permanent or destructive changes of the tissue, which are likewise accompanied by the production of deleterious chemical substances which set up constitutional disturbances and exhaust vitality. The particular form of degeneration known as cascation is probably peculiar to the lungs, lymphatic vessels, etc. Acting upon this theory the authors think they have found in certain drugs, the most prominent of which are chlorine, iodine and the double salt of gold and soda chloride, chemically pure, agents which will neutralize the toxalbuminoses, very much in the same way we suppose as Koch's tuberculinum renders inactive the ptomaines of the nests of microbes. It is a curious fact that the effect of these remedies given hypodermically and carefully noted in twenty-seven clinical cases, is very similar in many respects in the disturbances of the system to the tuberculinum of Koch.

With the majority of patients the authors commenced treatment with one-twelfth of a grain of iodine and gradually increased to one-half grain; the gold and soda solution gives no pain, and should be commenced with one-fiftieth grain and gradually increased until one-fifth grain is reached, when the quantity should be reduced to one-tenth grain daily if medication is to continue. At this stage one remedy can be used one day, the other the next. If albumin appears the iodine should be suspended and the gold only used. The use of iodine should be carefully watched for catarrhal symptoms and rapid reduction of flesh.

The temperature generally increases for a week or ten days, and may be accompanied by profuse sweating. The expectoration becomes less and more watery. Asthmatic symptoms and anorexia may in some instances supervene, the tongue becoming heavily coated, and when the point of saturation is reached diarrhœa comes on, the throat is dry and the patient listless. These symptoms only occur in a small percentages of cases, and gradually disappear under the injection of gold which seems to have a tonic action. Asthmatic râles are not unfrequently present, and are looked upon as favorable. Iodine can not be used for any great length of time, but the gold can, so that by using them alternately the effect of the iodine may be prolonged.

The clinical cases given are full of interest, and certainly show in some cases undoubted beneficial effects from the drugs.

THE LIMIT OF HUMAN EXISTENCE.

A COMMUNITY is usually surprised when it is announced that one among them has died at the advanced age of one hundred years, says the *Brooklyn Medical Journal*. When, however, the statement is made that some one has passed away at the age of one hundred and ten, incredulity takes the place of astonishment, and we imagine that a good deal of evidence would be required to convince even the most credulous that individuals now exist whose years reach a figure double the three score and ten of the psalmist. Yet such is the statement made by Dr. Remondino, of San Diego, in a paper recently read by him before the medical society of the State of California; and we think that the evidence submitted by him to substantiate this remarkable statement would be accepted by most persons as conclusive.

At the Indian village of Captain Grande are several Indian women whose ages are over one hundred and thirty years. Dr. Remondino quotes Dr. Edward Palmer, long connected with the Smithsonian Institute, as authority for the statement that there lives in Southern California a squaw who is one hundred and twenty-six years old, and that he has seen her carry, tied up in a blanket, six watermelons for a distance of two miles. A few miles below San Diego lives an Indian, bent and wrinkled, whose age is computed at one hundred and forty years. Although blind, he is still active, and daily goes down to the beach and along the beds of the creek in search of drift-wood, making it his daily task to gather and carry to the encampment a fagot of wood. Still another is mentioned who, although one hundred and fifteen years old, is wonderfully active and a great walker, a fifty-mile trip to the mountain for a bag of acorns, which he packs on his back, being an

ordinary matter for the old gentleman. Father Ubach, who is connected with the missions, is thoroughly conversant with the personal habits of all these old persons. He says their habits have been those of strict temperance and abstemiousness, their diet being exceedingly simple, consisting of acorns, flour and water. Dr. Remondino thinks that the climate is an important factor in producing this great longevity. There is in Southern California an almost complete immunity from hepatic and renal disorders; no land is so free from lung affections, while rheumatism and malaria are unknown. It results, therefore, he says, that from childhood to old age there are no deteriorating influences to encounter, and green old age is reached with an organism unimpaired and fully able to perform all its physiological functions, which enables the body to prolong its physical existence to that extreme limit that makes euthanastic death in that climate not only a possibility but a probability.

THE ITALIAN QUESTION.

THE history of the anarchists in Chicago brought out in strong light the fact that the political fanaticisms, which included the law defying and criminal mob of Europe, was being fast transplanted from those shores to our own, and were sowing here the seeds of misrule, more especially among the foreign element who had not yet learned or who did not care to learn the character of our institutions. The facts brought out by the acts of violence in Chicago and the terrible punishment meted out to the criminals, roused our government to a careful investigation of the character of the emigrants who are yearly brought to our ports by the thousands, and that investigation has led to the passage of a law excluding the pauper and those afflicted with contagious diseases. A careful watch is kept not only at Quarantine but at the landing, for all persons with contagious diseases or liable to become a tax upon the public for support, so that at present there is but little danger of the introduction of cholera, typhus fever, small-pox, leprosy, or any contagious disease from foreign ports.

Possibly the recent killing by a mob, of men in New Orleans indicted for murder, but who escaped conviction from the fact that the jury knew that a verdict of guilty would bring upon each man the terrible vengeance of the Mafia, a secret society pledged to carry out its own ideas of vengeance, will arouse the nation to the absolute necessity, if we would not have our citizens at the mercy of a band of assassins, to make careful inquiry, as it regards the previous history of every emigrant who visits our shore. If each emigrant was compelled to show a certificate from our foreign consuls that he had never been indicted for crime, there would at least be some protection from these poisonous elements which are now sowing the seeds of vice and crime broadcast over the nation. A law could easily be constructed which, while giving such liberty to the deserving emigrant, would effectually permit these lawless and debased elements of the scum of Europe from working out their plots in our midst.

ELECTRICAL TREATMENT OF GOUT.

AT THE Tenth International Medical Congress, Mr. Edison made a communication through Dr. Bayles, who represented him in the dermatological section, in which he urged the importance of using electricity to promote the distribution of gouty concretions. He described experiments by which the process of osmosis in animal membranes has been very much facilitated by the passage of an electrical current through the fluids and the membrane. This suggested to him the attempt to produce absorption of lithium salts in the immediate vicinity of the gouty accumulations. In one case he placed one hand of a healthy man in a solution of chloride of lithium, and the other in a solution of chloride of sodium, and connected the negative pole of a battery with the salt solution and the positive with the lithium solution. The current had a strength of four milliampères and lasted for two hours every day, until a total application of eleven hours had been made. Spectroscopic investigations showed that considerable portions of lithium were excreted in the urine. Edison next undertook the treatment of a man seventy-three years old who had very obvious chalky concretions near his joints, especially the finger joints. In this case the treatment consisted in the application of electricity passing through solutions of chloride of lithium (1.08 per cent.) and chloride of sodium, the current having a strength of one hundred and twenty volts and a resistance of five thousand ohms, the patient bearing a current of twenty milliampères without inconvenience; and this was applied four hours a day for six days. At the end of this time the diameter of the finger which was used as a test was found to have been reduced one-half a centimeter; the pains had disappeared on the first day. Further application of the current reduced the diameter of the finger somewhat more.

As the *Medical and Surgical Reporter* remarks, this experiment is more interesting than

conclusive. It has been long known that medication could be introduced into the system by means of the skin, if an electrical current were used to promote its absorption. What part of the action in the case described was due to the lithium which entered the economy, and what part to the local action of electricity, it would be hard to say until some comparative experiments have been made in regard to this subject. But the matter is one which deserves careful attention, and invites, we think, further experimentation on the part of medical practitioners familiar with the application of electricity and its capabilities as a remedial agent.

NEW YORK is at last to have what it has long needed, a botanical garden. The Bronx River Park is located on both sides of the Bronx River, between West Farms and Williamsbridge. Of this park, which contains 650 acres, 250 acres are to be set aside for a botanic garden on certain conditions which will, without doubt, be fulfilled. The beauty and diversity of the natural scenery of this region render it especially desirable for the proposed garden. The rolling character of the land on both sides of the beautiful little river gives it better natural advantages than Kew, after which, in its general arrangement, it will probably copy. While it is proposed to make the garden a beautiful pleasure park every day in the week, its distinctive educational and scientific character will be preserved. A corps of experimenters will be constantly engaged in researches among plants and their propagation that are valuable in medicine and in the arts. There is no flora in the world so rich in variety, in beauty and for use in medicine and arts as that of America, and none is so little known to the scientific world. Special attention therefore will be given to the trees and flora of our own continent. Possibly in the near future the menagerie which has long outgrown its present accommodation may be removed to the new park as the commencement of a "Zoo," which would soon rival that of London.

WHEN the Commissioners of Lunacy explained the provisions of the State care act for the insane, under which they were acting, and commenced enforcing them, the TIMES called the attention of the public and the profession to the injustice of a portion of the law, and suggested an appeal to the legislature to alter its objectionable features. The suggestions of the TIMES was carried out in Senator Richardson's amendment. At first there was a general feeling that the amendment would interfere with the law transferring the insane from County Alms Houses to State Hospitals, but when it was fully understood that no interference of that kind was intended, the wisdom and justice of the amendment became so apparent to every one that the State commissioners in lunacy withdrew all opposition, and it passed the House without one dissenting voice, and would in like manner have passed the Senate but for the dead-lock in that body. It would have been much better and have saved a great deal of trouble, if appropriations for the new buildings to accommodate the large influx of patients had been made before the transfer, but we have no doubt they will now be pushed forward as rapidly as possible.

THE GENU-PECTORAL POSITION IN TURNING.—Dr. E. T. Ensor reports in the *British Medical Journal* (April 19, 1890), a case in which he found turning much facilitated by placing the patient in the genu-pectoral position. He writes: I was called some time ago by an experienced midwife, to see a primipara at term; she saying a hand was presenting. I found not only a hand, but also a foot and the head, the last being impacted in the pelvis, having forced down before it the posterior segment of partially dilated os and cervix uteri, which it was injuriously compressing between itself and the promontory of the sacrum. The membranes had been ruptured a long while before I saw her, and the uterine contractions were nearly incessant. Patient declined chloroform, and, being on her left side, after attaching a tape to the presenting foot, I did what I could with the left hand in the vagina towards pushing the head above projection of sacrum, but without success; it then occurred to me that if I put her in the knee-chest position, so as to allow the womb and its contents, by virtue of their weight to fall forward and downward, turning might be made easier. This I did with the satisfaction of finding that I was enabled to complete the operation with the greatest ease imaginable; very slight pressure of the head with simultaneous traction on the leg being alone required. The child, which was of average age was, as might have been expected, still-born.

DR. FAULKNER, in the *New York Medical Journal*, details what in his hands has proved a very successful treatment of sub-acute laryngitis, which so often effects the voice of public speakers and vocalists. The patient is hoarse, throat sore with a tired, heavy feeling, and it is of the utmost importance that the voice shall be

in good condition in the evening. The acute symptoms are first treated with a one per cent. spray of cocaine, accompanied with aconite internally. After the acute symptoms have subsided a sixtieth of a grain of strychnine is given after breakfast, the same after the noon-day meal, and the thirtieth of a grain in the evening before starting for the rostrum or concert. If the acute symptoms have subsided the action of strychnine is prompt and all that can be desired.

ETHER DRINKING. — As our readers are doubtless aware, ether is used largely as an intoxicant in various parts of the North of Ireland, and the practice is stated to have arisen during the teetotle movement so successfully carried on by Father Mathew (*Brit. Med. Jour.*). . . . Those who had taken the pledge against alcohol not wishing to break it, found that by using ether they could still indulge in the habit of intoxication. The ether can be obtained at almost any hour. It is rapid in its action, and the effect disappears shortly; but the chief attraction is the small quantity about a tablespoonful or less, and the cheapness of the drug.

THE medical fees in the interior of China are so generous that they may possibly hold out a strong temptation to some of the graduates of our half hundred medical colleges to emigrate. Among the better classes the obstetrician gets two dollars when the child is a boy and one dollar for a girl. Among the poorer classes one dollar is counted a good fee for a boy and fifty cents for a girl. Aside from discrimination in sex, these are about the orthodox fees in some places in this country fifty years ago.

BIBLIOGRAPHICAL.

A TEXT-BOOK OF MATERIA MEDICA AND THERAPEUTICS, CHARACTERISTIC, ANALYTICAL AND COMPARATIVE. By A. C. Cowperthwaite, M. D., Ph.D., LL.D., Professor of Materia Medica and Therapeutics in the State University of Iowa. Author of "A Text-Book of Gynecology," "Insanity in its Medico-Legal Relations," etc. Sixth Edition. Entirely re-written and revised, with Clinical Index. Chicago: Gross & Delbridge, 1891.

The publishers take great pleasure in announcing to the profession that they will have ready June 15th, 1891, a sixth edition of the above popular work, which has for the past ten years unquestionably taken the lead of all other works on materia medica, being conceded to possess not only the best, simplest and most practical arrangement and presentation of the subject, but also to be the most authentic and reliable.

The entire text has been completely re-written and thoroughly revised. Every symptom of doubtful origin has been expunged, and a few authentic symptoms not appearing in former editions have been added.

The "General Analysis" of each drug has been re-written, and in many instances changed to conform to ideas resulting from more recent investigations in drug pathogenesy. Only those clinical symptoms that have been repeatedly verified, and which are undoubtedly reliable, are retained, and these are given a distinguishing mark, so that the student can tell at a glance whether a symptom is of pathogenetic or clinical origin.

The most important new feature of the sixth edition consists in the section on "therapeutics" under each remedy. The brief "therapeutic range" of former editions is omitted, and in its place appears a complete résumé of the clinical uses of the drug, and which, while comparatively brief, covers the entire range of therapeutic action, together with the chief symptomatic drug indications in all important diseased states.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONE 'S INDEX FOR 1891. Edited by P. W. Williams, M. D., Secretary of Staff, Assisted by a Corps of Thirty-Eight Collaborators—European and American—Specialists in their several departments. 600 Octavo pages. Illustrated. $2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The ninth yearly issue of this valuable one-volume reference work is to hand; and it richly deserves and perpetuates the enviable reputation which its predecessors have made, for selection of material, accuracy of statement and great usefulness. The corps of department editors in number and ability surpass that of last year. Its numerous illustrations—many of which are in colors—make the "Annual" more than ever welcome to the profession, as providing, at a reasonable outlay, the handiest and best résumé of medical progress yet offered.

Part I. comprises the new remedies, together with a review of the therapeutic progress of the year.

Part II. is devoted to special articles on diagnosis; the first on deformities of the hand, and their diagnostic value in nerve lesions; the second on the character of the sputum as an aid to diagnosis.

Part III., comprising the major portion of the book, is given to the consideration of new treatment; and is a retrospect of the year's work, with numerous original articles by eminent authorities.

The fourth—and last part—is made up of miscellaneous articles, such as recent improvements in sanitation; concerning climatology and hygiene; alcoholic inebriety, and the results of asylum treatment; improvements in pharmacy; books of the year, etc.

The arrangement of the work is alphabetical, and with its complete index, make it a reference book of rare worth.

In short, the "Annual" is what it claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world. Price, the same as in previous years—$2.75.

APHORISMS IN APPLIED ANATOMY (OR ANATOMY FOR THE FINAL EXAMINATIONS) AND OPERATIVE SURGERY, including One Hundred Typical *viva voce* Questions in Surface Marking, etc., being Notes of Demonstrations to his Surgery Class. By Thomas Cooke, B. A., B. Sc., M. D. (Paris), F. R. C. S. (Eng.), Senior Assistant-Surgeon to the Westminster Hospital, and Lecturer at the School of Anatomy, Physiology and Surgery. London: Longmans, Green & Co., and New York: 15 E. 16th Street, 1891.

The title of this book sufficiently explains its scope, the text bears out expectation, and the student will find it of great service in preparation for his final examination.

PRINCIPLES OF SURGERY. By N. Senn, M. D., Ph. D., Milwaukee, Wis., Professor Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago, Ill.; Professor of Surgery in the Chicago Polyclinic; Attending Surgeon to the Milwaukee Hospital; Consulting Surgeon to the Milwaukee County Hospital and to the Milwaukee County Insane Asylum; Honorary Fellow College of Physicians in Philadelphia; Member of the American Surgical Association, of the American Medical Association, of the British Medical Association, of the Wisconsin State Medical Society, etc. Illustrated with One Hundred and Nine Wood Engravings. Philadelphia: F. A. Davis, 1890; pp. 612, Octavo.

The author's reputation for original research is such, that when he addresses the profession he is sure to command attention! He has the facility of concise and understandable condensation in a remarkable degree, so that his text is filled with essentials so constructed that it reads easily and is full of interest.

The author says it has been his aim to provide a book for the student and general practitioner which would enable them to master the *principles* which underlie surgical procedure, and he has succeeded in his effort.

A CYCLOPÆDIA OF DRUG PATHOGENESY. Edited by Richard Hughes, M. D., J. P. Dake, M. D., etc. New York: Bœricke & Tafel, 1891. Part XIII., "Sabina—Sulphur." Part XIV., "Sulphur—Valeriana."

This work is rapidly approaching completion, and the profession is urgently requested by the editors to send contributions for the appendix, which it is proposed to issue, to cover errata, new observations, etc., to make the text as complete as possible. Those who desire the work should subscribe at once.

ELECTRICITY: ITS APPLICATION IN MEDICINE, is a textbook condensed for practical work into two volumes for twenty-five cents each, and yet so thoroughly is the ground covered that the reader has an accurate description of all the best instruments for medical work. George S. Davis, Publisher, Detroit.

J. B. Lippincott Company will, beginning with April, issue quarterly thereafter a work entitled "International Clinics." This work will comprise the best and most practical clinical lectures on medicine, surgery, gynæcology, pediatrics, dermatology, laryngology, ophthalmology and otology, delivered in the leading medical colleges of this country, Great Britain and Canada. These lectures have been reported by competent medical stenographers and thoroughly revised by the professors and lecturers themselves. The object of the work is to furnish the busy practitioner and medical student with the best and most practical instruction, in concise form. Each volume will consist of over 350 octavo pages, illustrated with photographic reproductions of important cases.

The Physicians' Leisure Library, published by George S. Davis, Detroit, continues to give the profession monographs for twenty-five cents, prepared by the best specialists in the world, and written in that clear, concise and practical manner which will attract immediate attention. "Taking Cold," by F. H. Bosworth, M. D., deserves a wider circulation than among the profession. It should be in the hands of every man and woman in the country.

Injection for Gonorrhœa.—A new specific for Gonorrhœa is a one per cent. solution of creosote in decoction of hamamelis combined with boric acid. It is claimed that this will destroy the gonococci in two hours.

CORRESPONDENCE.

CAN SECTARIAN PRACTITIONERS COLLECT THEIR FEES?

To the Editors of THE NEW YORK MEDICAL TIMES:

The above question is editorially discussed in the April number of the *Toledo Medical Compend*, which quotes the following passage from Reese's *Medical Jurisprudence*, page 625:

"While the law prescribes no one absolute system of medicine, a practitioner is expected to practice according to the system he professes and avows; a departure from this system, if accompanied with some serious or fatal mistake of remedy, would render him justly liable to a criminal charge. Hence, a regular practitioner, and one employed as such, if he should surreptitiously and without the patient's consent, use homœopathic or botanical treatment to the detriment of his patient, would clearly be liable for damages to the latter; and moreover, he could not recover his compensation for attendance, in a suit at law, because he had departed from his avowed system of practice. For the same reason, a homœopathic or botanical physician, practicing either of these systems avowedly, if he should have employed the regular system instead of his own, and his patient fail to make a good recovery, would equally be held liable for damages, and would equally be exposed to a non-suit in any attempt to collect his fee, in a civil court."

Upon this the *Compend* remarks: "It is evident not only to physicians but also to the laity, that the large majority of homœopaths do not prescribe strictly in accordance with *similia similibus*. That they, while professing homœopathy, do, in reality, practice regular medicine. * * * It is also evident that many of these would, if the matter was put to the test, be unable to collect payment for the services rendered."

It may be doubted whether the number of professed homœopathists who surreptitiously practice "regular medicine" is any greater than that of "regulars" who are in the habit of employing, without acknowledgment, homœopathic remedies on the homœopathic principle, and in what used to be considered homœopathic doses. But let that pass. It is of more importance that both the editor of the *Compend* and the writer on whom he relies appear to entertain the idea that every practitioner, without exception, must necessarily belong to some particular and exclusive "school"—a vulgar error which I am surprised to see adopted by any educated member of the profession at the present day. Very different is the view taken by Judge Barrett in his opinion given through your columns two years ago. This distinguished jurist is in perfect agreement with the authority just cited as to the legal obligation resting on a physician to practice according to the system he professes and avows. "An honest homœopath," he says, "who has not succeeded, after doing his best with the appropriate homœopathic remedies,—should undoubtedly try anything else which he believes may save or relieve his patient. *But when he reaches that point, the duty of taking his patient into his confidence becomes imperative.*" And again: "If a physician calls himself allopathic and is summoned as such, it would be a fraud to resort to homœopathic treatment without full disclosure to the patient of what was proposed." But Judge Barrett is careful to add: "If I call in a physician pure and simple—calling himself neither homœopathist nor allopathist—the implied understanding is that I entrust myself to his best judgment in all respects. * * * *If we are to have a class of men who purpose, in the interest of humanity, to utilize the best they can find in any and every school, 'pathist,' as a designation of fixed methods of practice, must be ignored, and the broad and noble title 'physician,' in its unreserved sense, be revived and substituted. The patient will understand, when he sends for one of this*

class, that he is to have the physician's best judgment in the unprejudiced use of the ripest fruits of modern discovery in every field."

Therefore, of course, there could be no thought of withholding such a physician's compensation, whatever the issue of his case, if only he had exercised ordinary skill and care. But how is it with the professed follower of Hahnemann—with the man, for instance, who, by uniting with a homœopathic society, has publicly avowed himself a homœopathist, and who has, at the same time, solemnly affirmed his belief that homœopathy is the best way of treating the sick—consequently that he can not depart from it without risk of injury to his patient? He has most plainly "stamped his school upon his work as a practitioner" (to use Judge Barrett's expression), thus leading his patients to expect homœopathic treatment, and nothing else, in every case where drug medication is relied upon. This implied understanding must be faithfully carried out, or the practitioner, as the very least penalty, forfeits the right to enforce payment of his bill. Dr. T. F. Allen airily assures us that every member of a certain medical association is equally entitled to be called a homœopathist, whether he practices homœopathy "more or less," and this may be quite true, so far as his professional colleagues only are concerned. But the law, interposing its ægis for the protection of his *patient*, declares that designation and practice must strictly correspond—*i. e.*, that (except with that patient's knowledge and consent) he must never deviate from homœopathy, and this without any regard to his ability or inability to make proper use of other therapeutic methods.

Let us see in what a situation this places even the most liberally educated practitioner who saddles himself with distinctive titles and affiliations. Says Dr. Daniel Lewis, president of the State Medical Society: "There is a homœopathic college so called in the State of New York, which teaches every form of materia medica or therapeutics practiced by any school. If that college would drop its sectarian name it would become more nearly the model school than any other college in the State." But the name is retained, and its graduates go forth similarly "badged and ticketed;" consequently, with acquirements covering the whole vast territory of medicine, their professional activity is legally confined within the limits of a single province. Surely an unbearable predicament, even though no practical disadvantage may seem at present to result from it!

The law in the case, founded as it is on justice and common sense, will never be abrogated, nor can it, in the long run, be successfully defied. The only way of shaking off its burdens, is through the abolition of "school."

E. D. N.

PLEASE TELL ME THE "REASON."

Voltaire said Rousseau was coaxing us to return to a state of nature "so eloquently, that he almost persuaded us to go on all fours." In like manner the editorial, "Let Us Reason Together," is calculated to put the most strenuous homœopathic physician on his knees. "Admit the premise and its reasoning is correct."

The said premise takes this shape: "The opposition of the Old School is due more to our exclusiveness * * * to our ringing the changes upon the word homœopathy * * * than to any of the factors of our therapeutics or our philosophy."

As now quoted, the premise is assertive; in the editorial it is interrogative in form but affirmative in spirit: in either shape it is worthy of calm consideration.

As I have reason to think I myself am the "valued correspondent" * whose letter afforded the text for the editorial. I deem it advisable to state that fact for the sake of the bearing which it has upon such a statement as I am about to make. And, in that statement, I beg leave to use the first person singular: it has the convenience of brevity and it enhances my responsibility.

When the Army Medical Museum was established, some microscopical mountings of mine led an official therein—an assistant surgeon in the regular army—to open a correspondence with me; the final result of which was that a certain species of preparations and mountings for the museum was assigned to me. My connection was in no sense official—it was simply and only the brotherhood of science. The recognition came to me unsought, and it was honored to the fullest extent of my capacity as a microscopist.

Beside the preparation and mounting of "specimens," the subject of micro-photography—then a largely undeveloped field—entered into our correspondence. I was deemed worthy of consultation thereon, and to me belonged at least a trifling share in the final results.

A few years past; the Army Medical Museum had attained magnificent dimensions; it had "broken the record" in micro-photography; it was rich in material that would add a new chapter to the pathological anatomy of the diseases which make an army hospital more devastating than a battle, and wishing to give honor where honor was due, I purposed writing up the said museum, and accordingly wrote to my correspondent—the leading official in it—for certain needful *data*. At the end of my letter I stated that I was preparing the paper for a homœopathic journal. By return mail came the enquiry: "What have you to do with a 'homœopathic journal?'" [The official who made this enquiry knew that I had served in the Army of the Potomac as a medical officer, but he did not learn this until after he had solicited my services as a microscopist.] In my reply to his query I "rang no changes upon the word homœopathy," but simply stated that my convictions placed me in that school of medicine.

From that day until his death he wrote me no other word; and when he subsequently visited the village in which I lived during our correspondence, and was the guest of a family to which I was the physician, he ignored me. The pursuits of science that delighted him he knew to be as dear a delight to me; but he could have no fellowship in even microscopy with a homœopathic physician. I could not for my life see what relation *similia similibus curantur* had to my sections of the spinal cord, nor have I found out to this day!

While this official knew me only by my work as a microscopist, he used to send me rare mounted specimens, fine photographic "positives," splendid micro-photographs, and sundry publications of the Surgeon-General's Office—which I as a citizen helped to pay for. These courtesies to a fellow-soldier and a fellow-microscopist ceased as suddenly as his correspondence. It was he, not I, that "rang *these changes* upon the word homœopathy."

He was my superior in scholarship and in science, but even then I lived at an altitude and in an atmosphere to which his soul was a sad stranger.

My experience with the "Old School" for over thirty years convinces me that this pitiful specimen of manhood was never for one moment "lonesome" during the whole period of his professional life. He had

"Comrades to right of him,
Comrades to left of him,
Comrades in front of him,"

of the same kidney; and to emphasize the kinship, it was also

"Theirs *not to reason why*."

Just here, Mr. Editor, I could give you a conundrum of large caliber, but I forbear. In return for my consideration, perhaps you will allow me a few words concerning "the opposition of the Old School."

It is chiefly opposing a therapeutic formula which, in latter-day terms, may be expressed as follows: *The physi-*

* The letter which called forth the editorial, to which Dr. Jones's letter is a reply, was not from Dr. Jones, but from Dr. J. P. Dake.

ological action of a drug affords the clue to its application in disease. Hahnemann established this by experiments which, for patient investigation and extent of research, entitle him to the respect of every sincere lover of science.

His life work is one which none of his detractors—homœopathic or Old School—have excelled. For his pertinacity of purpose, his steadfastness of devotion, and his high courage of conviction, he will forever be ranked with the greatest of all the ages. And the history of medicine must testify that he gave the world the first therapeutic method that is not based on either the uncertainty of empiricism or the vagaries of theory. We may distrust his dynamization theory because it is theory; we may reject his psoric hypothesis as at best only hypothesis, but his therapeutic "law," as the old struggler defiantly called it, is to be refuted only by "imitating exactly" his application of it. He challenges that: and no one of his sincerity has picked up his gauntlet. We have had travesties, from an Andral in a Parisian hospital, all the way down, down, down to a *quasi*-physician who was a needy adventurer in a Milwaukee engineer's office!

Is this homœopathic stronghold so impregnable that its enemies can assail it with only their stink-pots?

This therapeutic formula, this deduction from experiments *in corpere sano*, Hahnemann phrased—not offensively—*similia similibus curantur*. This is the red rag that infuriates the Old School bull. From the first announcement the Old School has fought this as a fiction; and, lo! as the world "does move," their own savants are obliged to acknowledge that a drug which in a certain dose produces nausea, in a dose of a different quantity relieves nausea.

Hinc illæ lachrymæ, or, in the vernacular, "hence the steers." [Referring, of course, to the progeny of the Old School bull.]

Hahnemann is right, after all! He whom they had despised and rejected, is to-day the crowned victor in the arena! Alas, dear little Marjorie Fleming's "8 times 8" is not the only thing that "is devilish!"

* * * * * * * *

Only for the "pure cussedness" that attends the *genus homo* like its shadow, Hahnemann's deduction would have taken its place in medicine as did the discovery of the circulation, and of vaccination. He was no son of Hagar who formulated the *law of similars*; he, too, was a priest unto Æsculapius; he, too, had sworn the Hippocratic oath in solemn fealty. And he found his conviction deepened when he saw the law that he had learned from experiment shining like a pole star in the revered *Aphorisms*.

Why is "the word homœopathy" offensive? Is it a derivative that no scholar questions for purity of lineage. Is it at once the most exact and the tersest expression of the actual fact of the formula that it designates. Its chief offensiveness lies in the other fact that, in the light of history, it also reads, by a translation which is the irony of fate,

In hoc signo vinces!

When a physician is no longer ostracized because he has learned the truth of homœopathy and avows his belief, I am willing to give up the name, because I know the virtue of the thing is fixed by the same fiat that gives the rose its fragrance; until then a true man will "ring the changes on the word" in gratitude to the teacher and in justice to himself. S. A. J.

Ann Arbor, April, 10th.

Two wrongs never make a right! It was wrong for the profession, as a school, to have ostracised Hahnemann and his followers as it did, and it was also wrong in our opinion for Hahnemann's followers to have established a school in medicine upon a single dogma.

The letter of our correspondent is best answered by Hahnemann in his "Lesser Writings," p. 363, in which he says: "*The rallying motto of a sectarian name is incapable of exciting to sober, calm, scientific investigation; it only rouses the explosive spirit of accusations of heresy to a fierce, volcanic flame. Truth and weal of humanity should be the only motto of the genuine elucidators of the art, and the watchword of the brotherly, peaceful bond of reunion, without slavish adherence to any sectarian leader, if we would not see the little good that we know completely sacrificed to party spirit and discord.*"

Is it not about time to appropriate a little of Hahnemann's practical common sense and drop a name which is so offensive to the multitude, while we hold on to principles which are proved to be truth?—EDS.

OBITUARY.

DR. JAMES M. WARD, for many years a leading physician in Brooklyn, died suddenly at his residence in Bedford Avenue, April 15th, in the sixty-seventh year of his age. Dr. Ward for several years held the chair of Theory and Practice in the N. Y. Homœopathic Medical College, and was distinguished alike for his ability as a teacher and for his skill and thorough devotion to duty in his profession.

DR. HORATIO ROBINSON, one of the most esteemed physicians in Central New York, died at his home in Auburn, April 29, in the 61st year of his age. Dr. Robinson's affiliations had always been with the homœopathic school of medicine, but his skill as a diagnostition and his ability as a prescriber made his advice sought for by men of all schools, while his general information in every department of literature, science and art, gave him a high social standing. Dr. Robinson was, in the broadest sense of the word, a *physician*, seeking information from every source it could be obtained, and using it with excellent judgment in the relief of suffering.

The Effect of Christian Science and Mind-Cure on "the Regular Practice."—It is a very old observation that a dominant idea is valuable in controlling the human being, and whether it be in the bearing of pain or in the devotion which leads the Turk to die contentedly before the Russian bullets, belief is a factor that may be turned to great advantage. Indirectly, Christian science may prove an aid to medical science. The intelligent physician of to-day could receive no greater aid in the scientific practice of his profession than to be emancipated by his patients from the obligation invariably to prescribe a drug. When people are willing to employ physicians to order their lives so that they may live in health, the custom which binds the physician to prescribe something for his patient will be unnecessary. As we have become more civilized this state of affairs is gradually coming into place; but there still lingers the expectation that the doctor's visit means drugs. Christian science and faith-cure, more refined than the spiritualistic beliefs which have preceded them, form an interesting study in mental pathology, and mark an advance from the grosser stage of table-tipping and magnetic doctors to a recognition of the fact that among the weapons employed by the scientific physician of to-day an appeal to a determined purpose to overcome pain is worthy of a place beside antiseptics and anodynes and tonics.—*The Century for April.*

TRANSLATIONS, GLEANINGS, ETC.

The New School of Philosophy at Cornell University.—The announcement of courses in the Susan Linn Sage School of Philosophy in Cornell University is made public. This new foundation is in large part due to the generosity of Mr. Henry W. Sage, whose gifts to Cornell University now aggregate about $1,250,000. Supplementing Mr. Sage's endowments with annual appropriations from the general funds of the University, the trustees have been enabled to provide for the School of Philosophy a faculty of four professors and four instructors, to equip a new psychological laboratory, and to establish for graduate students who go to Cornell for philosophy six scholarships and three fellowships, the annual value of the former being $200, and of the latter $400, besides free tuition.

It is the aim of the faculty to make the school "a thoroughly efficient center for the maintenance, diffusion, and increase of philosophical knowledge and activity in America." The methods of instruction guarantee to students much personal attention from their teachers. And in the advanced classes and seminaries (of which one each is devoted to psychology, metaphysics, ethics, and pedagogics), the professors meet their pupils as fellow-workers whom they seek to guide, partly by direct suggestion and criticism, but largely also by precedent and example. The courses of instruction offered are unusually rich and varied. They embrace logic, psychology, metaphysics, ethics, pedagogics, and the history and philosophy of religion. Nor has thoroughness been sacrificed to comprehensiveness. It has been secured, in the most effective way, by the appointment of a specialist for each of the foregoing subjects. Furthermore, two specialists have been provided for the general history of philosophy in connection with the development of the sciences and the progress of civilization; and of these one will be restricted to Greek philosophy. In the distribution of work among the members of the faculty, a plan has been adopted which, though novel in this country, seems to have much to recommend it besides the practice of the German universities. The professors give the elementary instruction and conduct the seminaries, with scarcely an exception; the instructors take a large number of the advanced lecture-courses, but their teaching is made so light that abundant time is left for research and investigation in their respective specialties. From the attractiveness of such positions to experts the school has been able to secure as instructors men between twenty-seven and thirty-five years of age who have already done work as investigators and teachers, qualifying them for professorships, which two of them have already occupied.

Ample provision has been made also for the study of physiological and experimental psychology, but the growing tendency to put it for the whole of philosophy has been resisted. The older philosophical disciplines—logic, metaphysics, ethics—have received equally generous recognition. Pedagogy, which is the application of psychology to the work of teaching, has been included among the philosophical courses, as it always is in Germany. Indeed, the old circle of the philosphical sciences has been expanded so as to embrace the study of the religious consciousness of mankind on both its historical and philosophical sides. The Hibbert lectures in England and the Gifford lectures at the four Scottish universities indicate the kind of work to be undertaken by the Cornell professor of the history and philosophy of religion. The chair seems essential to a complete school of philosophy, and its foundation was advised and urged by Réville, the French historian of religions, and by German metaphysicians like Zeller of Berlin and Kuno Fischer of Heidelberg. It will meet an existing need in America. The school is to issue, under the editorship of its Dean, Dr. Schurman, a bi-monthly periodical, to be called the *Philosophical Review*, for which the co-öperation of the leading philosophical teachers and writers of the country has been promised.

[We are indebted for this information to the *Evening Post*.]

Cure of an Obstinate Icterus by an Exploratory Laparotomy (Routier, *Le Prog. Med.*).—The patient, a woman, was suddenly attacked with jaundice, and three days later with violent hepatic colic. In spite of all treatment the attacks of colic, with vomitings and chills, continued. The condition being serious and an eschar of the sacrum intervening, surgical measures were resorted to, and a median sub-umbilical laparotomy performed. Examination found the gall-bladder non-distended, and its walls, though thickened, pliable. After successively feeling and pinching the neck of the bladder, the region of the hepatic ducts, cystic and choledochus, and the head of the pancreas, without finding any obstruction, the wound was closed. The vomitings and icterus promptly disappeared, and the patient was cured, notwithstanding an intercurrent broncho-pneumonia. The theory of cure was that the massage or handling of the organs had displaced mucous plugs which were interfering with the course of the bile. (T. M. S.)

The National Conference of Charities and Corrections.—The National Conference of Charities and Corrections (*The Century* for May) has issued a call to its eighteenth annual meeting, to be held in Indianapolis from the 13th to the 20th of May, and since Indianapolis is a city peculiarly awake to sociological interests, and since the Rev. Oscar McCulloch, the president of the coming conference, is president of the organized charities of the city as well as pastor of one of its prominent churches, the conference is likely to be a notable one.

It will doubtless surprise our readers to be told that a large number of them are in all probability members ex-officio of this conference. There are, indeed, few intelligent men and women of our day who are not connected with some charitable or reformatory or other philanthropic institution as managers or trustees or members of committees, or who are not active workers in some organized form of benevolence, and all such, though they be as little aware of it as M. Jourdain that he was talking prose, are in fact entitled to a seat in this conference and to a voice in its discussions. * * *

That the proceedings of such a body as this are of such value as to be eagerly sought by public libraries not only in this country but all over Europe, the annual sale of the volume containing them forming the only and the adequate revenue of the association, is a sufficient proof of the standing and ability of those who take part in these meetings. * * *

The great task of the sociological reformer is to educate public opinion and to inform the public mind. As Bishop Gillespie said at one of these conferences, "Public abuses do not exist where there is public knowledge," and that public abuses do exist in such large numbers shows how much the community needs such a fountain of illumination as these conferences are.

The Capacity of the Stomach in Infancy.—The subject of the quantity of food to be allowed to artificially fed infants is second in importance only to the character and preparation of the food given. Dr. L. E. Holt has measured the capacity in 142 infants with the following result:

1. Starting at birth with a capacity of about one ounce, the stomach increases in size at the rate of one ounce a month during the first three months, reaching at this time about one-half the capacity seen at one year.

2. From then to eight months its growth is much lower, being, on the average, about half an ounce a month.

3. From eight to fourteen months the rate of growth is still less, being, on the average, one-third of an ounce a month. Approximately *at the ages of one, three, six and fourteen months, the capacity is respectively one, four and a half, six and nine ounces.* In short, that there is a fairly constant relation between the age of the infant and the capacity of the stomach, which offers a good guide.—*Archives of Ped.*

MISCELLANY.

—According to the Archives De Medecine Militaire the German army has the lowest death rate, 3.97 per 1,000, while the Spanish has the highest, 13.40 per 1,000. Next after Germany comes Belgium, with a mortality of 4.7; then Great Britain, with 5.13; then France, with 6.06; then Austria-Hungary, with 6.94; then Italy, with 7.74; and finally Russia, whose 8.88 brings her next to Spain. The most prevalent malady—pulmonary tuberculosis—counts more patients in the German army, however, than in the French, the figures being 3.12 for the former, as against 2.6 for the latter; though, on the other hand, the actual deaths from it are fewer in the German than in the Belgian or French army, the proportion being respectively 0.83, 1 and 1.11 per 1,000.

—In a Philadelphia hospital, one of the staff asked for the use of an unoccupied room, to be fitted up as a gymnasium for the systematic exercise of patients after operation. The request was not granted; but, shortly after, the room was appropriated and furnished as a parlor, where the nurses could receive their visitors, and have dancing parties. Truly, it is better to be a nurse than a patient.

—It is related by Joulin, that, in the days of knee-breeches, shoe-buckles and gold-headed canes, a physician, finding a post-partum hemorrhage uncontrollable, pulled off his powdered wig, crammed it into his patient's uterus, and saved her life thereby.

—A more deserving medical man than our friend R. does not exist. He very frequently accepts no fees from his patients. You don't say so. Why is it? He generally settles with the heirs.

—A sanitary census has recently been made in an athletic club of this city, and it was shown thereby that it had quite a number of damaged members. Out of thirty-three all-round athletes in the club five years ago, three had died by consumption, five had to wear trusses for hernia, four or five are lop-shouldered, and three or more have impaired hearing and catarrh. For robust health and longevity, it is best not to look among those who go their full lengths in modern systems of athleticism.

—Dr. Bantock, of the Samaritan Hospital, London, uses hot salt chloride of sodium water for flushing the abdominal cavity when necessary in abdominal section. He gives Dr. Gill Wylie, of New York, credit for the addition of the salt, seven parts to one thousand of hot water. When this is used in the cavity, the process becomes "a true indirect transfusion." Therefore, it can be easily understood how the hot-salt solution is serviceable in lessening shock due to loss of a quantity of blood.

—The Supreme Court of Minnesota has lately decided that bank checks are not cash, and do not possess legal value as money until cashed; in other words, the giving of a check on a bank is not a payment when passed between debtor and creditor, but only becomes so when the money is received on it.

—It is reported that the United States Marine Hospital Service will recommend the plan of having a systematic examination of all persons intending to immigrate to this country. This examination would be made by physicians attached to the United States consulates

—It is reported that physicians have been sent by the Russian Government to Asia-Minor to test by experiment the treatment of cholera with the ferubia sumbul, a plant growing in Turkestan and possessing anti-spasmodic properties.

—Dr. Geo. T. Stewart, chief of staff of the W. I. Hospital, reports 831 patients treated in that institution during February, 1891, with a death rate of 1.56 per cent.

—From Pekin comes the news that in future members of the Imperial family and mandarins of the highest rank are to be exempted from knocking their heads on the ground in presence of the Emperor. They are simply to crawl to the foot of the throne. The innovation is regarded in many quarters as too radical.

—The subject of asepsis and anti-sepsis was freely discussed in the late international Congress. The whole subject resolves itself into one word: "Cleanliness."

—According to the French law, so says the *Medical Record*, the last born of twins is said to be the elder of the two. The curious decision was arrived at on the authority of the faculty, who held that the last to be born was the first to be conceived.

—Under the disturbing influence of a threatened epidemic, ignorant and superstitious Spaniards have killed three medical men. Though provided with military escort, doctors taking sanitary precautions are often subject to violence.

—When it is desired to produce the specific effects of mercury on the system, as in syphilis, it will be found necessary, as a rule, says the *Medical World*, to give larger doses to dark-complexioned persons than to others. Fair-skinned patients are in general more easily brought under its influence.

—Functional disturbance of the liver is often characterized by a peculiar form of shallow respiration, accompanied by almost incessant sighs.

—Judge McCue, of California, now in Washington, told a friend recently that he had solved the food problem, and that he could live in Washington on ten cents a day. Asked for an explanation he said: "I usually turn out at about 11 o'clock and take breakfast. I go to the dairy around the corner and buy a cup of coffee for five cents, and with the other five cents I get five Maryland biscuits."

"Well, that exhausts your ten cents, Judge; how do you get your other meals?"

"I am coming to that presently, my friend. Don't be impatient and you shall have the whole story. My breakfast is eaten slowly and well-digested. It generally lasts me until about 4 o'clock in the afternoon. At that time the gnawing of hunger begins to assert itself. This is where my discovery comes in. I always go provided with several pieces of alum. When I begin to get hungry I place one of these bits of alum in my mouth and allow it to slowly dissolve. The effect is that it contracts the throat and the stomach, and the sensation of hunger disappears. I repeat this dose until bed time, and I fall asleep like a child. Gentlemen, let me tell you that eating is nothing but a habit after all."

—The Paris correspondent of the *Lancet* says that the Correctional Tribunal of L'Orient lately sentenced a midwife to six months' imprisonment. She was accused of having caused in one month, through neglect of the necessary precautions, the death of seven of her patients, who succumbed to puerperal fever.

—A writer in *Science* says, that while as yet we have discovered no way of avoiding contagion which comes to us in the air, we are just beginning to find out the extremely important fact that the air does not become contaminated with bacteria unless they are allowed to dry. Recent investigations, he adds, have shown a smaller number of bacteria in the air of a well-kept sewer than in that of a poorly-ventilated schoolroom.